

DocVQA: A Dataset for VQA on Document Images - Supplementary

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A. Screen grabs of Annotation Tool

As mentioned in Section 3.1 in the main paper, annotation process involves three stages. In Figure A.1, Figure A.2 and Figure A.3 we show screen grabs from stage 1, stage 2 and stage 3 of the annotation process respectively.

B. Examples of Question Types

We define 9 question types, based on the kind of reasoning required to answer a question. Question types are assigned at the second stage of the annotation. We discuss the question types in Section 3.2. in the main paper.

Examples for types *form*, *yes/no* and *layout* are shown in Figure B.1. Examples for a question based on a handwritten date in a form (types *form* and *handwritten*) are shown in Figure B.2. An example for a question based on information in the form of sentences or paragraphs (type *running text*) is shown in Figure B.3. Examples for types *photograph* and *table* are shown in Figure B.4. An example for a question based on a plot (type *figure*) is shown in Figure B.5. In all examples a crop of the original image is shown below the original image, for better viewing of the image region where the question is based on.

C. Additional Qualitative Examples

Here we show more qualitative results from our baseline experiments. These results supplement the Results section (Section 5.3) in the main paper.

Remember that BERT [2] question answering model is designed to answer questions asked on sentences or paragraphs of electronic text (reading comprehension). In Figure C.1 we show two examples where the model answers questions outside the scope of reading comprehension style question answering. In Figure C.2 we show examples where the M4C [3] model outperforms the BERT model to answer questions based on text seen on pictures or photographs. Such questions are similar to questions in TextVQA [4] or ST-VQA [1] datasets where M4C model yield state-of-the-art results. In Figure C.3 we show an example where both the models yield inconsistent results when posed with questions of similar nature, highlighting lack of reasoning

behind answering. In Figure C.4 we show two examples where both the M4C and BERT model fail to answer questions which require understanding of a figure or a diagram. In Figure C.5 we show how OCR errors have resulted in wrong answers although the models manage to ground the questions correctly.

References

- [1] Ali Furkan Biten, Ruben Tito, Andres Mafla, Lluís Gomez, Marçal Rusinol, Ernest Valveny, C.V. Jawahar, and Dimosthenis Karatzas. Scene text visual question answering. In *ICCV*, 2019.
- [2] Jacob Devlin, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova. BERT: Pre-training of deep bidirectional transformers for language understanding. In *ACL*, 2019.
- [3] Ronghang Hu, Amanpreet Singh, Trevor Darrell, and Marcus Rohrbach. Iterative answer prediction with pointer-augmented multimodal transformers for textvqa. In *CVPR*, 2020.
- [4] Amanpreet Singh, Vivek Natarjan, Meet Shah, Yu Jiang, Xinlei Chen, Devi Parikh, and Marcus Rohrbach. Towards vqa models that can read. In *CVPR*, 2019.

The screenshot shows the 'Annotation Tool' interface. On the left is a document titled 'REQUEST AND AUTHORIZATION FOR MILITARY PERSONNEL TDY TRAVEL AND CIVILIAN PERSONNEL TDY AND PCS TRAVEL'. The document contains various fields for personal and travel information. On the right, a 'Questions' panel lists three questions:

- Question 1: 'does it look like an old form?' with the answer 'No answers yet.'
- Question 2: 'yes the form looks like an old form' with a 'Cancel' and 'Add' button.
- Question 3: 'What is the value entered in the field "arroximate number of daaaaays"?' with the answer '3'.

At the bottom of the questions panel, there are two buttons: 'Skip Document' and 'Finish Annotation'.

Figure A.1: **Annotation stage 1 - Question Answer Collection:** Questions and answers are collected for a given document image. Annotator can add upto 10 questions for a document. The document can be skipped if it is not possible to frame questions on it.

The screenshot shows the 'Annotation Tool' interface in a different state. The document on the left is the same. The 'Questions' panel on the right now includes verification options for each question:

- Question 1: 'What is the value entered in the field "arroximate number of daaaaays"?' with the answer '3'. It has a red highlight 'Serious Lang. issue' and a green highlight 'form'.
- Question 2: 'Which type of travel order is selected ?' with the answer 'TDY . UCMR PROPER STA,'. It has a green highlight 'form'.
- Question 3: 'What is the telephone extension number?' with the answer 'CX 62069'. It has a red highlight 'Serious Lang. issue' and a green highlight 'form'.

Below the questions, there is a 'Types' dropdown menu with options: 'free_text', 'table/list', 'form', 'layout', and 'figure/diagram'. The 'form' option is selected and highlighted in blue.

Figure A.2: **Annotation stage 2 - Data Verification:** For each question shown annotators have to (i) enter answer(s) (answer(s) from first stage are not shown) and (ii) Tag the question with one or more question types from the 9 question types shown in a drop-down (question types assigned to a question are shown in green highlight color.) or (iii) flag/ignore the question by selecting the check-box corresponding to one of the reasons such as "invalid question", "Serious lang. issue" etc. (the reasons chosen for flagging a question are shown in red highlight color)

SPECIAL POS / PDI REQUEST FORM

Requesting RJR Manager A.P. GROLL Date 03/13/1998
 Region Number 1200 Voice Mail Number 51565
 Store / Chain Name LOVE STORES No. of Stores 20
 Requesting (Check One) ☒ Produced POS / PDI ☐ Digital Art Mechanical Only
 Is this an existing item? ☐ No ☒ Yes Or a new item? ☒ No ☐ Yes Due Date Required 03/15/1998
 Description of Request (Give as much detail as possible)
CAMEL SHOPPING BASKETS

Drawing of Request (Attach separate drawing if necessary and sample if available):

Exact Size: _____ " (H) _____ " (W)
 Size excluding dead areas: _____ " (H) _____ " (W)
 Identify Dead Areas (Hidden by frames, etc) _____ " (Top) _____ " (Bottom) _____ " (Sides)
 Quantity Requested 50 SKU Pack 1
 Ship To Location (If this request is to be warehoused by RJR, please write RJR in the name area)
 Name RJR - NEW YORK METRO ROU
 Address RARITAN CENTER - 400 RARITAN CENTER PARKWAY
 City EDISON State NJ Zip Code 08837
 Attention A.P. GROLL

Complete the below information only if art is being requested for local production:

Store / Chain Contact Name _____ Phone _____
 Printer / Supplier Contact Name _____ Phone _____

After approval by Region Sales Manager, e-mail or fax form to your Area Manager of Operations.
 Allow a minimum of 6 to 8 weeks for special requests.

RSM Approval M. A. Young Date 3-17-98
 AMO Approval _____ Date _____

| TO BE COMPLETED BY WINSTON-SALEM | | | |
|----------------------------------|---------------------|-------------------|-----------------------|
| DATE REQUEST RECEIVED | REQUISITION DATE | ITEM NO. ASSIGNED | SKU PACK |
| WAREHOUSE | | | PG NUMBER ASSIGNED |
| SUPPLIER ASSIGNED | | | DUE DATE IN WAREHOUSE |
| PROJECT ESTIMATED COST | PROJECT ACTUAL COST | | GL CODE ASSIGNED |

Source: <https://www.industrydocuments.ucsf.edu/docs/mly0000>

Store / Chain Name LOVE STORES

Requesting (Check One) ☒ Produced POS / PDI

Is this an existing item? ☐ No ☒ Yes Or a new item?

Description of Request (Give as much detail as possible)

03/17/98 TUE 08:18 FAX 7328831723

AF

SPECIAL POS / P

Requesting RJR Manager A.P. GROLL

Region Number 1200

Q: Is it an existing item ?

Question types: *form* and *yes/no*

A: yes

Q: What is the date given at the top left?

Question types: *layout*

A: 03/17/98

Figure B.1: On the left is a question based on an yes/no check box. On the right, the question seeks for a date given at a particular spatial location — top left of the page.

SPECIAL POS / PDI REQUEST FORM

Requesting RJR Manager A.P. GROLL Date 03/13/1998
 Region Number 1200 Voice Mail Number 51955
 Store / Chain Name LOVE STORES No. of Stores 20
 Requesting (Check One) ☒ Produced POS / PDI ☐ Digital Art Mechanical Only
 Is this an existing item? ☐ No ☒ Yes Or a new item? ☒ No ☐ Yes Due Date Required 03/15/1998
 Description of Request (Give as much detail as possible)
CAMEL SHOPPING BASKETS

 Drawing of Request (Attach separate drawing if necessary and sample if available):

 Exact Size: _____ " (H) _____ " (W)
 Size excluding dead areas: _____ " (H) _____ " (W)
 Identify Dead Areas (Hidden by frames, etc) _____ " (Top) _____ " (Bottom) _____ " (Sides)
 Quantity Requested 50 SKU Pack 1
 Ship To Location (If this request is to be warehoused by RJR, please write RJR in the name area)
 Name RJR - NEW YORK METRO ROU
 Address RARITAN CENTER - 400 RARITAN CENTER PARKWAY
 City EDISON State NJ Zip Code 08837
 Attention A.P. GROLL
 Complete the below information only if art is being requested for local production:
 Store / Chain Contact Name _____ Phone _____
 Printer / Supplier Contact Name _____ Phone _____
 After approval by Region Sales Manager, e-mail or fax form to your Area Manager of Operations.
 Allow a minimum of 6 to 8 weeks for special requests.
 RSM Approval M.A. Young Date 3-17-98
 AMO Approval _____ Date _____
 TO BE COMPLETED BY WINSTON-SALEM

| | | | |
|------------------------|---------------------|-------------------|-----------------------|
| DATE REQUEST RECEIVED | REQUESTION DATE | ITEM NO. ASSIGNED | SKU PACK |
| WAREHOUSE | | | PO NUMBER ASSIGNED |
| SUPPLIER ASSIGNED | | | DUE DATE IN WAREHOUSE |
| PROJECT ESTIMATED COST | PROJECT ACTUAL COST | | OL CODE ASSIGNED |

Source: https://www.industrydocuments.ucsf.edu/docs/rnly0000

After approval by Region Sales Manager, e-mail or fax form to your Area Manager of Operations.
 Allow a minimum of 6 to 8 weeks for special requests.
 RSM Approval M.A. Young Date 3-17-98
 AMO Approval _____ Date _____
 TO BE COMPLETED BY WINSTON-SALEM

| | | | |
|------------------------|---------------------|-------------------|-----------------------|
| DATE REQUEST RECEIVED | REQUESTION DATE | ITEM NO. ASSIGNED | SKU PACK |
| WAREHOUSE | | | PO NUMBER ASSIGNED |
| SUPPLIER ASSIGNED | | | DUE DATE IN WAREHOUSE |
| PROJECT ESTIMATED COST | PROJECT ACTUAL COST | | OL CODE ASSIGNED |

Q: What is the date written next to RSM approval?

Question types: *form* and *handwritten*

A: 3-17-98

Figure B.2: Date is handwritten and it is shown in a *key:value* format.

SPECIAL POS / PDI REQUEST FORM

Requesting RJR Manager A.P. GROLL Date 03/13/1998
 Region Number 1200 Voice Mail Number 51565
 Store / Chain Name LOVE STORES No. of Stores 20
 Requesting (Check One) ☒ Produced POS / PDI ☐ Digital Art Mechanical Only
 Is this an existing item? ☐ No ☒ Yes Or a new item? ☒ No ☐ Yes Due Date Required 05/15/1998
 Description of Request (Give as much detail as possible)
CAMEL SHOPPING BASKETS

 Drawing of Request (Attach separate drawing if necessary and sample if available):

 Exact Size: _____" (H) _____" (W)
 Size excluding dead areas: _____" (H) _____" (W)
 Identify Dead Areas (Hidden by frames, etc) _____" (Top) _____" (Bottom) _____" (Sides)
 Quantity Requested 50 SKU Pack 1
 Ship To Location (If this request is to be warehoused by RJR, please write RJR in the name area)
 Name RJR - NEW YORK METRO ROU
 Address RARITAN CENTER - 400 RARITAN CENTER PARKWAY
 City EDISON State NJ Zip Code 08837
 Attention A.P. GROLL
 Complete the below information only if art is being requested for local production:
 Store / Chain Contact Name _____ Phone _____
 Printer / Supplier Contact Name _____ Phone _____
 After approval by Region Sales Manager, e-mail or fax form to your Area Manager of Operations.
 Allow a minimum of 6 to 8 weeks for special requests.
 RSM Approval [Signature] Date 3-17-98
 AMO Approval _____ Date _____

| TO BE COMPLETED BY WINSTON-SALEM | | | |
|----------------------------------|---------------------|-------------------|-----------------------|
| DATE REQUEST RECEIVED | REQUISITION DATE | ITEM NO. ASSIGNED | SKU PACK |
| WAREHOUSE | | | PO NUMBER ASSIGNED |
| SUPPLIER ASSIGNED | | | DUE DATE IN WAREHOUSE |
| PROJECT ESTIMATED COST | PROJECT ACTUAL COST | GL CODE ASSIGNED | |

Source: https://www.industrydocuments.ucsf.edu/docs/nly0000

Quantity Requested 50 SKU Pack 1
 Ship To Location (If this request is to be warehoused by RJR, please write RJR in the name area)
 Name RJR - NEW YORK METRO ROU
 Address RARITAN CENTER - 400 RARITAN CENTER PARKWAY
 City EDISON State NJ Zip Code 08837

Q: If the request needs to be warehoused by RJR, what needs to be done ?

Question types: *running text*

A: write to RJR

Figure B.3: Question is grounded on a sentence.

nitrogen

by Dr. Dwayne G. Westfall



Dr. Dwayne G. Westfall
Senior Plant Nutritionist

A native of Aberdeen, Idaho, Dwayne received his Bachelor's Degree in Agronomy from the University of Idaho in 1961. His Ph.D. Degree was earned in Soils from Washington State University in 1967. After graduating from the University of Idaho, he served as fieldman for Lamb-Weston, Inc., a potato processing firm in American Falls, Idaho. Two years of Army service followed as plant pathologist at the U.S. Army Biological Laboratory. Dwayne joined Texas A & M University as assistant professor in 1967 and was advanced to associate professor in 1972. In September of 1973 he joined Great Western's agricultural research staff.

Recommendations

The top foot of soil should be analyzed for nitrate, phosphorus, potassium, organic matter and pH and the remaining soil down to the five foot level should be analyzed only for nitrate nitrogen in one foot increments.

Nitrogen fertilizer recommendations should take into consideration, 1) amount of nitrate nitrogen in the entire soil profile, 2) organic matter content, 3) manure applied, 4) crop residue plowed under.

Colorado State University researchers have found that if the residual soil nitrate nitrogen level is over 100 pounds per acre, the probability of a significant yield response to additional nitrogen fertilizer is very small.

The following calculations show how to determine the amount of nitrogen fertilizer to apply:

ppm nitrate nitrogen * 3.6 = pounds of nitrate-nitrogen in one foot of soil
percent organic matter x 30 = lbs N/A available from organic matter
tons manure applied per acre x 5 = lbs N/A available from manure
alfalfa plowed under = 50 lbs N/A
previous crop beans = 30 lbs N/A
10 lbs N are required for each ton of sugarbeets the grower estimates he will produce

nitrogen fertilizer recommendation = growers yield goal - (residual soil nitrate-nitrogen + N available from organic matter, manure, alfalfa and beans)

*If soil results are received in ppm rather than lbs/A

Soil Nitrogen

In 1972, deep soil samples were taken on about 200 fields in the Nebraska, NCC and NEC&K Districts. The sucrose percentages, yields and soil nitrogen levels are shown in the table. These results show that for every 100 pounds increase in soil nitrogen level, there was a 0.18% decrease in sucrose content. Yields did not change dramatically as the soil nitrate-nitrogen level increased from 100 to 500 pounds.

Nitrogen Rate X Variety Tests

Six tests were conducted in 1973 in which several varieties were grown at various nitrogen fertility levels to determine if all varieties responded the same to high soil nitrogen levels. The results are summarized in the following table. The residual soil nitrate nitrogen levels in the six fields ranged from 30 to 70 pounds per acre. The results show that sugarbeet yields increased as the nitrogen rate increased and there was a significant decrease in sucrose percentage at the high nitrogen rate as well as a decrease in purity. The pounds of ex-

Effect of Nitrogen Level on Sucrose Percentage and Yield

| N Level* lb/A | Nebraska | | District NCC | | NEC&K | | Average | |
|------------------|--------------|--------------|-----------------|--------------|--------------|--------------|--------------|--------------|
| | Sucrose % | Yield T/A | Sucrose % | Yield T/A | Sucrose % | Yield T/A | Sucrose % | Yield T/A |
| 101-200 | 16.4 | 22.7 | 17.4 | 20.4 | 16.0 | 20.8 | 16.6 | 21.3 |
| 201-300 | 16.4 | 22.8 | 17.1 | 21.9 | 16.4 | 20.6 | 16.6 | 21.8 |
| 301-400 | 16.2 | 22.5 | 16.5 | 22.0 | 15.8 | 19.7 | 16.2 | 21.4 |
| 401-500 | 15.9 | 22.5 | 15.9 | 22.8 | 15.3 | 22.4 | 15.7 | 22.6 |
| 501+ | | | 16.3 | 21.8 | 15.5 | 18.7 | 15.9 | 20.2 |

*Fertilizer nitrogen applied plus residual soil nitrogen

2

Source: <https://www.industrydocuments.ucsf.edu/docs/khnc0226>



Dr. Dwayne G. Westfall
Senior Plant Nutritionist

| N Level* lb/A | Nebraska | | District NCC | | NEC&K | | Average | |
|------------------|--------------|--------------|-----------------|--------------|--------------|--------------|--------------|--------------|
| | Sucrose % | Yield T/A | Sucrose % | Yield T/A | Sucrose % | Yield T/A | Sucrose % | Yield T/A |
| 101-200 | 16.4 | 22.7 | 17.4 | 20.4 | 16.0 | 20.8 | 16.6 | 21.3 |
| 201-300 | 16.4 | 22.8 | 17.1 | 21.9 | 16.4 | 20.6 | 16.6 | 21.8 |
| 301-400 | 16.2 | 22.5 | 16.5 | 22.0 | 15.8 | 19.7 | 16.2 | 21.4 |
| 401-500 | 15.9 | 22.5 | 15.9 | 22.8 | 15.3 | 22.4 | 15.7 | 22.6 |
| 501+ | | | 16.3 | 21.8 | 15.5 | 18.7 | 15.9 | 20.2 |

*Fertilizer nitrogen applied plus residual soil nitrogen

Q: Whose picture is given?

Question types: *photograph* and *layout*

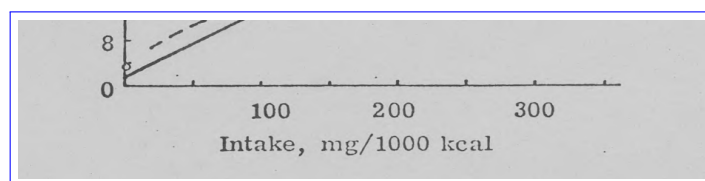
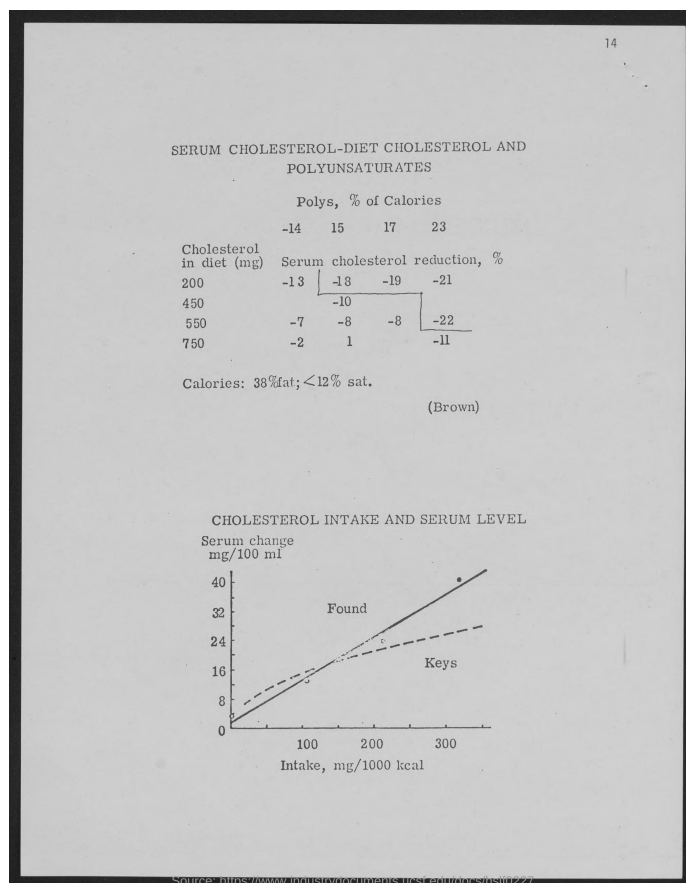
A: Dr. Dwayne G. Westfall

Q: What is the average sucrose % for N level 501+ ?

Question types: *table*

A: 15.9

Figure B.4: On the left is a question asking for name of the person in the photograph. To answer the question on the right, one needs to parse the table and pick the value in the appropriate cell



Q: What is the highest value for "Intake, mg/1000kcal"
plotted on the 'X' axis of the graph?

Question types: *figure*

A: 300

Figure B.5: Question is based on the plot shown at the bottom of the given image, asking for the highest value on the X axis

ROCHE, A. F.
370 56 0985

Privileged Communication

4) D₂O. This will be done at the Brehm Laboratory, Wright State University, under the direction of Dr. Thomas O. Tiernan. Unit charges per test (3 samples per test at \$35 per sample) are \$105 for the -04 year, increasing by 10% per year. There is a unit cost at Webb Associates of \$20 per person (test) for provision of receptacles, handling and transporting the specimens. These unit costs are based on information in letters from Dr. Tiernan (pp. 25-26) and Dr. Webb (p. 23).

| | Unit Cost | -04 | | -05 | | -06 | |
|-----------------------------------|-----------|-----|-----------------|-----|-----------------|-----|-----------------|
| | | N | Total | N | Total | N | Total |
| D ₂ O (Brehm Lab.) | \$105* | 220 | \$23,100 | 156 | \$18,018 | 94 | \$11,943 |
| Handling & transport (Webb Assoc) | 20 | 220 | 4,400 | 156 | 3,120 | 94 | 1,880 |
| Compensation to participants | 5 | 220 | 1,100 | 156 | 780 | 94 | 470 |
| TOTALS | | | \$28,600 | | \$21,918 | | \$14,293 |

TOTALS FOR ALL YEARS \$ 64,811.
*increased 10% annually.

5) Fat cell size and number. The unit cost is \$209 with a 10% cost adjustment for each additional year. This work will be done at Mt. Sinai School of Medicine under the direction of Dr. Jerome Knittle. The cost includes provision of personnel, use of equipment, supplies, preparation of reports, relevant consultation and interpretation. This unit cost is described in a letter on p. 27. The total costs are shown below. There is a unit cost at Fels of \$3.00 to cover the cost of disposable syringes (one for local anesthetic and one to obtain fat at each examination), local anesthetic, band-aids and shipping.

| | Unit Cost | -04 | | -05 | | -06 | |
|------------------------------|-----------|-----|-----------------|-----|-----------------|-----|-----------------|
| | | N | Total | N | Total | N | Total |
| Fat cell size (Mt. Sinai) | \$209* | 220 | \$45,980 | 156 | \$35,864 | 94 | \$23,772 |
| Biopsy and handling (Fels) | 3.00 | 220 | 660 | 156 | 468 | 94 | 282 |
| Compensation to participants | 3.00 | 220 | 660 | 156 | 468 | 94 | 282 |
| TOTALS | | | \$47,300 | | \$36,800 | | \$24,336 |

TOTAL FOR ALL YEARS \$108,436
*The unit cost has been increased 10% annually in accordance with union contracts.

Page 17 January, 1980

Source: <https://www.industrydocuments.ucsf.edu/docs/hfw0227>

island desserts (continued from page 7)

HAWAIIAN FRUIT CAKE

- 1 cup seedless raisins
- 1/4 cup seeded raisins
- 2/3 cup diced citron
- 1/4 cup diced candied orange peel
- 1/4 cup diced pineapple
- 1/3 cup chopped dates
- 1/4 cup candied cherries
- 1/4 cup diced candied lemon peel
- 1/4 cup chopped macadamia nuts
- 1/4 cups shredded coconut
- 1 tablespoon sherry
- 1/2 teaspoon ginger juice
- 1 1/3 cup flour
- 2/3 cup shortening
- 1 cup brown sugar
- 4 eggs
- 1/2 teaspoon cinnamon
- 1/2 teaspoon nutmeg
- 1/2 teaspoon soda
- 1/2 cup guava jelly

Preheat oven to 375 degrees. Grease two 8 1/2 x 2 1/2 inch loaf pans. Line with foil or brown paper. Combine fruits, nuts and coconut. Sprinkle with brandy, sherry and ginger juice. Stir in 1/2 cup of the flour. Cream shortening and sugar. Add eggs and beat well. Sift remaining flour with cinnamon, nutmeg, cloves and soda; stir into the creamed mixture. Add jelly and mix well. Stir in fruit mixture. Pour into prepared pans and bake for 3 hours. Makes 2 - 2 lb. cakes.

MALASADAS

- 1 package yeast
- 1/2 cup warm water
- 1 tablespoon sugar
- 6 cups flour
- 2 cups sugar
- 1/2 cup warm milk
- 1/8 lb. melted butter
- 8 eggs slightly beaten

Dissolve yeast in water and 1 tablespoon sugar. Measure dry ingredients in a large bowl, add melted butter, beaten eggs, dissolved yeast and warm milk, (added slowly). Mix well to form soft dough. Cover and place in serene area. Let stand until it rises to double in bulk. Form into small balls and drop into hot oil and cook until brown. Roll in granulated sugar. Serve warm. Yield: Approx. 2 1/2 dozens.

HAUPA

- 2 cups coconut milk (frozen)
- 1/4 cup water
- 4-6 tablespoons sugar
- 6 tablespoons cornstarch

Melt coconut milk in a double boiler. Combine and stir the above ingredients until smooth. Cook and stir over a low heat until it has thickened completely. Increase the heat slightly and stir the pudding vigorously to prevent it from burning. Remove pudding and pour into a 1-inch deep cake pan. Let it cool till set, then cut into 2-inch squares and serve.

Board a sailing ship out of the past... Explore the endless night skies... Witness authentic chants and dances... And discover the life of ancient Hawaii.

Bishop Museum's
PASSPORT TO POLYNESIA

SEE YOUR HOTEL TRAVEL DESK OR HERITAGE THEATRE, KING'S ALLEY 922-3388

46 Latitude 20/November 1978

are shown below. There is a unit cost at Fels of \$3.00 to cover the cost of disposable syringes (one for local anesthetic and one to obtain fat at each examination), local anesthetic, band-aids and shipping.

| | Unit Cost | -04 | | -05 | | -06 | |
|----------------------------|-----------|-----|----------|-----|----------|-----|----------|
| | | N | Total | N | Total | N | Total |
| Fat cell size (Mt. Sinai) | \$209* | 220 | \$45,980 | 156 | \$35,864 | 94 | \$23,772 |
| Biopsy and handling (Fels) | 3.00 | 220 | 660 | 156 | 468 | 94 | 282 |

island desserts (continued from page 7)

HAWAIIAN FRUIT CAKE

- 1 cup seedless raisins
- 1/4 cup seeded raisins
- 2/3 cup diced citron
- 1/4 cup diced candied orange peel
- 1/4 cup diced pineapple
- 1/3 cup chopped dates

MALASADAS

- 1 package yeast
- 1/2 cup warm water
- 1 tablespoon sugar
- 6 cups flour
- 1/2 cup sugar
- 2 cups warm milk

Q: What is the total cost for Fat cell size (Mt. Sinai) in the -05 year ?

GT: \$35,864

M4C best: 4400

BERT best: \$35,864

Human: \$35,864

Q: What is the first recipe on the page?

GT: hawaiian fruit cake

M4C best: island desserts (continued from cake

BERT best: hawaiian fruit cake

Human: hawaiian fruit cake

Figure C.1: Examples where BERT QA model [2] answers questions other than 'running text' type. On the left is a question based on a table and for the other question one needs to know the 'first recipe' out of the two recipes shown. For the first question the model gets the answer correct except for an extra space, and in case of the second one the predicted answer matches exactly with the ground truth answer.

16. Courses in which you wish to enroll: (Please read instructions carefully and check the appropriate boxes).

A.M. Schedule
☐ Fundamentals of Biostatistics M-T-W-Th-F.
 If you have selected this course, do not select the following morning courses:
 Alternate
☒ Principles and Methods of Epidemiologic Research T-Th-S
 or
☐ Epidemiology of Occupational Hazards T-Th-S
 and
☐ Epidemiology of Cancer M-W-F
 or
☐ Epidemiology of Cardiovascular Diseases M-W-F

P.M. Schedule
☐ Fundamentals of Epidemiology M-T-Th-F
 If you have selected this course, do not select the following afternoon courses:
 Alternate
☒ Health Services Planning and Evaluation T-Th
 or
☐ Epidemiology of Injuries T-Th
 and
☐ Infectious Disease Epidemiology M-W-F
 or
☒ Epidemiology of Nutritional Diseases and Abnormalities M-W-F

17. Please make the following room reservation for me:
☒ Middlebrook Hall (Two in a room, twin beds) Arrive _____ Depart _____

18. Signature of Applicant Granda H. H. H. Date 4/15/76

19. I approve of this application _____
 Department Chairman or Advisor

Send this form with check for \$25.00, made payable to the University of Minnesota, to: Dr. Leonard M. Schuman, Program Director, Epidemiology Summer Session, Division of Epidemiology, Room 1-117 Unit A, Health Sciences Building, University of Minnesota, Minneapolis, Minnesota 55455.

APPLICATIONS MUST BE RECEIVED BY MAY 17.

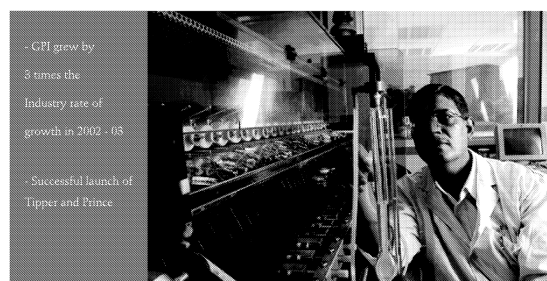
Let Yourself Grow!

The University of Minnesota adheres to the principle that all persons shall have equal opportunity and access to facilities in any phase of University activity without regard to race, creed, color, sex, age or national origin. Under this principle, educational, cultural, social, housing, extra curricular and employment opportunities are available to all on an equal basis.

Fulfilling the potential to win

Inspired individuals share their story- what drove them to succeed against the odds and how they realized their goals.

"The launch of three new brands has been the joint effort of everyone, right across the company. From buying the leaf, to the blend, the R&D, the processing, the packaging and finally the marketing, sales and distribution, all had to work in tandem, to achieve one goal. It's really true, **success is about teamwork, it is about five fingers coming together to form a fist.**"



"I am really proud to be part of the team that worked on re-launching Prince in the market. We knew that we had a winning brand on our hands. We were so clear about the aim, we knew that we had to find a way to achieve it. That's why I believe that once you have the passion to succeed, nothing can stand in your way. Let's have no doubt about it, except the ones you read it."

The passion to succeed - it's a value that cuts right across the organization. Every individual is determined to realize his or her potential to be a winner.

Source: <https://www.industrydocuments.ucsf.edu/docs/znbx0223>



Q: What is written inside logo in the bottom of the document?

GT: **let yourself grow!**

M4C best: **yourself grow!**

BERT best: **< no prediction >**

Human: **let yourself grow!**



Q: What Tobacco brand of GPI is shown in the picture?

GT: **Prince**

M4C best: **prince**

BERT best: **< no prediction >**

Human: **prince**

Figure C.2: **How does the M4C [3] model perform on questions based on pictures or photographs.** Here we show two examples where the best variant of the M4C model outperform the BERT best model in answering 'layout' type questions seeking to read what is written in a logo/pack. The BERT model doesn't make any predictions for the questions.



Report on Corporate Governance

- Major accounting entries based on exercise of judgement by management
 - Significant adjustments, if any, arising out of audit
 - Compliance with Accounting Standards
 - Compliance with Stock Exchange and legal requirements concerning financial statements
 - Related party transactions
 - Qualifications, if any, in draft audit report
 - Report of the Directors & Management Discussion and Analysis;
- (d) Reviewing with the management, external and internal auditors, the adequacy of internal control systems and the Company's statement on the same prior to endorsement by the Board;
- (e) Reviewing the adequacy of the internal audit function, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure, coverage and frequency of internal audit;
- (f) Reviewing reports of internal audit, including that of wholly owned subsidiaries, and discussion with internal auditors on any significant findings and follow-up thereon;
- (g) Reviewing the findings of any internal investigations by the internal auditors and the executive management's response on matters where there is suspected fraud or irregularity or failure of internal control systems of a material nature and reporting the matter to the Board;
- (h) Discussion with the external auditors, before the audit commences, on nature and scope of audit, as well as after conclusion of the audit, to ascertain any areas of concern and review the comments contained in their management letter;
- (i) Reviewing the Company's financial and risk management policies;
- (j) Looking into the reasons for substantial defaults, if any, in payment to shareholders (in case of non-payment of declared dividends) and creditors;
- (k) Considering such other matters as may be required by the Board;
- (l) Reviewing any other areas which may be specified as role of the Audit Committee under the Listing

Agreement, Companies Act and other statutes, as amended from time to time.

Composition

The Audit Committee presently comprises four Non-Executive Directors, three of whom are Independent Directors. The Chairman of the Committee is an Independent Director. The Executive Director representing the Finance function, the Chief Financial Officer, the Head of Internal Audit and the representative of the Statutory Auditors are Invitees to the Audit Committee. The Head of Internal Audit is the Co-ordinator and the Company Secretary is the Secretary to the Committee. The representatives of the Cost Auditors are invited to meetings of the Audit Committee whenever matters relating to cost audit are considered. All members of the Committee are financially literate; three members, including the Chairman of the Committee, have accounting and financial management expertise.

The names of the members of the Audit Committee, including its Chairman, are provided under the section 'Board of Directors and Committees' in the Report and Accounts.

Meetings and Attendance

Details of Audit Committee Meetings during the financial year

During the financial year ended 31st March, 2014, eight meetings of the Audit Committee were held, as follows:

| Sl. No. | Date | Committee Strength | No. of Members present |
|---------|----------------------|--------------------|------------------------|
| 1 | 6th May, 2013 | 6 | 4 |
| 2 | 17th May, 2013 | 6 | 5 |
| 3 | 25th July, 2013 | 6 | 6 |
| 4 | 28th August, 2013 | 5 | 5 |
| 5 | 23rd September, 2013 | 5 | 5 |
| 6 | 25th October, 2013 | 5 | 5 |
| 7 | 17th January, 2014 | 5 | 5 |
| 8 | 31st March, 2014 | 5 | 3 |

Meetings of the Audit Committee were held, as follows.

| Sl. No. | Date | Committee Strength | No. of Members present |
|---------|----------------------|--------------------|------------------------|
| 1 | 6th May, 2013 | 6 | 4 |
| 2 | 17th May, 2013 | 6 | 5 |
| 3 | 25th July, 2013 | 6 | 6 |
| 4 | 28th August, 2013 | 5 | 5 |
| 5 | 23rd September, 2013 | 5 | 5 |
| 6 | 25th October, 2013 | 5 | 5 |
| 7 | 17th January, 2014 | 5 | 5 |
| 8 | 31st March, 2014 | 5 | 3 |

Q: What was the committee strength for the first meeting?

GT: 6

M4C best: 6

BERT best: 6

Human: 6

Q: What was the committee strength for the last meeting?

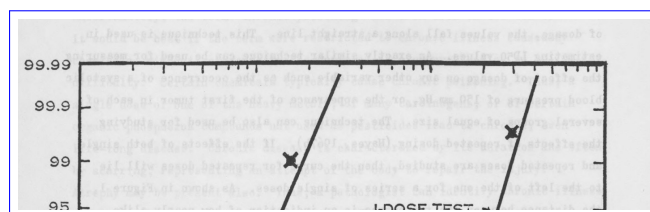
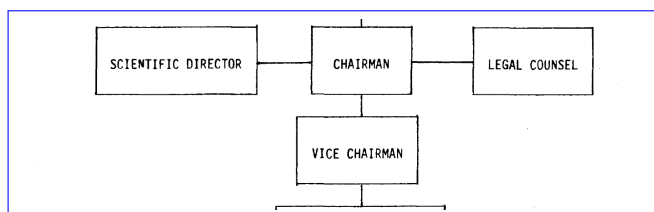
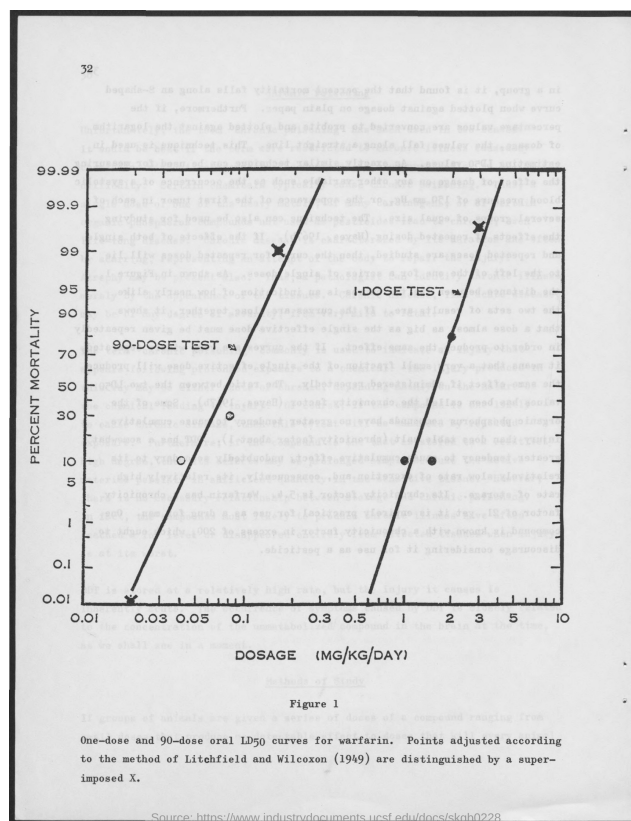
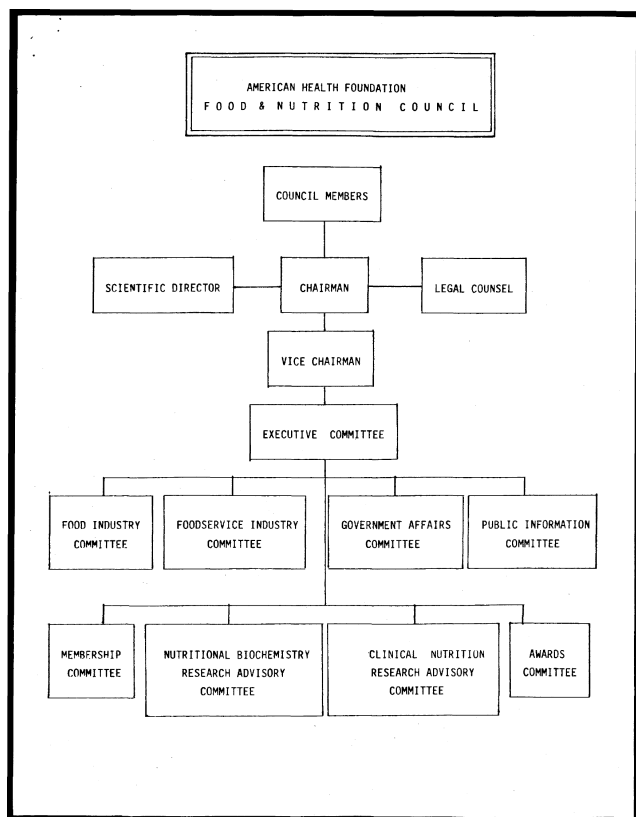
GT: 5

M4C best: 6

BERT best: 6

Human: 5

Figure C.3: **Contrasting results for similar questions.** Here both the questions are based on the table at the bottom of the image. Both questions ask for 'committee strength' for a particular meeting (first or last). Both models get the answer right for the first one. But for the question on the right, the models predict same answer as the first one ("6") while the ground truth is "5". This suggests that the models' predictions are not backed by a proper reasoning/grounding in all cases.



Q: What is the position above "vice chairman" ?

GT: chairman

M4C best: legal counsel

BERT best: legal counsel

Human: chairman

Q: What is the highest value shown on the vertical axis?

GT: 99.99

M4C best: 50

BERT best: 32

Human: 99.99

Figure C.4: **Understanding figures and diagrams.** In case of the question on the left, one needs to understand an organizational hierarchy diagram. For the second question, one needs to know what a 'vertical axis' is, and then find the largest value. Both the models fail to answer the questions.

