

# Daniel Li, Ph.D

[Identifying Information Redacted]

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Citizenship: United States of America

## Education

|           |                                                                                                       |
|-----------|-------------------------------------------------------------------------------------------------------|
| 2022-2023 | OFFICER COMMISSION <sup>1</sup> . <i>09S Candidate</i> , United States Army Officer Candidate School. |
| 2018-2022 | PH.D. <i>Computer Science</i> , Columbia University.                                                  |
| 2018-2021 | M.PHIL. <i>Computer Science</i> , Columbia University.                                                |
| 2017-2018 | M.Sc. <i>Electrical Engineering and Computer Science</i> , University of California, Berkeley.        |
| 2014-2017 | B.Sc. <i>Electrical Engineering and Computer Science</i> , University of California, Berkeley.        |

## Areas of Specialization

Artificial Intelligence • Natural Language Processing • Financial Markets

## Current Position(s)

|              |                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2017-Present | <i>Co-Founder (2)</i> , Proprietary Trading <sup>2</sup> <ul style="list-style-type: none"><li>• <b>Mid 7 figure</b> (USD) accounts, <b>low 8 figure</b> (USD) notional position sizing.</li><li>• Performance: <b>550% ROI</b> since inception (as of Q1'22).</li><li>• Various strategies; sectors: equities, commodities, digital assets.</li></ul>                          |
| 2018-Present | <i>Limited Partner</i> , Dekrypt Capital <ul style="list-style-type: none"><li>• Starting LP in blockchain venture capital firm, <b>9 figure</b> (USD) AUM.</li><li>• Co-investors include a16z, Coinbase Ventures, Softbank, Tiger Global.</li></ul>                                                                                                                           |
| 2022-Present | <i>09S Officer Candidate</i> , United States Army <ul style="list-style-type: none"><li>• Active Duty, Intended MOS: 11A Infantry Officer.</li><li>• Officer Candidate School at Fort Benning, Georgia.</li><li>• Basic Combat Training at Fort Leonard Wood, Missouri.</li><li>• <i>Patriotic call to serve and give back for all the opportunities I was given.</i></li></ul> |

## Industry Experience

|           |                                                                                                                                                                                                                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021-2022 | <i>Researcher</i> , Google Research & Machine Intelligence @ Cloud AI Translation <ul style="list-style-type: none"><li>• Investigated confidence score calibration in multilingual quality estimation.</li><li>• Improved automatic quality classification of translation systems.</li></ul> |
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<sup>1</sup>In Progress.

<sup>2</sup>Using personal assets among co-founders, currently not incorporated as any entity. No active positions as of Q1'22.

- 2020-2021 *Researcher*, Google Research & Machine Intelligence @ Google Translate
- Neural machine translation robustness for automatic speech recognition.
  - Improved automatic speech translation by +1 to +1.4 BLEU points.
- 2019S *Researcher*, Memorial Sloan Kettering Cancer Center
- Computer vision techniques for analyzing and understanding tumor data.
- 2017S *Research Intern*, NEC Laboratories
- Deep learning research in adaptive memory networks with a focus on faster inference.
- 2016S *Software Engineering Intern*, Factual Inc. (Foursquare)
- Fuzzy entity resolution of large scale databases.

## Academic Positions

- 2018-2022 *Ph.D Researcher*, Computational Design Lab at Columbia University
- Natural Language Processing focused on abstractive summarization for speech applications.
  - Thesis: *Enabling Structured Navigation of Longform Spoken Dialog with Automatic Summarization*.
  - Advisor: Professor Lydia Chilton.
- 2017-2020 *Graduate Student Instructor*, UC Berkeley and Columbia University
- User Interface Design & Machine Learning for Functional Genomics.
- 2016-2018 *Research Assistant*, Rao Group at UC Berkeley
- Investigation on gene feature identification and accurate dimensionality reduction through memory autoencoders.
  - Thesis: *Adaptive Memory Networks*.
  - Advisor: Professor Satish Rao.
- 2015-2018 *Research Assistant*, Pachter Lab at UC Berkeley
- Research in approaches to RNA-sequencing with features in abundance estimation, transcript annotation difficulties, differential expression.

## Publications

- 2022 **Daniel Li\***, Thomas Chen\*, Thomas Chen, Albert Tung, Lydia Chilton. *An Abstractive Hierarchical Dialog Summarization Corpus: Designing, Collecting, and Annotating Recursive Summaries*. Columbia University, Microsoft, Stanford University. *In Preparation*.
- Daniel Li\***, Thomas Chen\*, Albert Tung, Lydia Chilton. *Improving User Navigation and Browsing of Longform Spoken Dialog*. Columbia University, Microsoft, Stanford University. *In Preparation*.
- 2021 **Daniel Li**, Junpei Zhou, Music Li Lydia Chilton. *Investigating Translation Quality Estimation in Bilingual Models*. Google, Columbia University. *Under Review*.
- Daniel Li\***, Thomas Chen\*, Albert Tung, Lydia Chilton. *Hierarchical Summarization for Longform Spoken Dialog*. Columbia University, Microsoft, Stanford University. **UIST 2021**.

Jennifer Chen, Faisal Ladhak, **Daniel Li** and Noémie Elhadad. *Incorporating Human Explanations for Robust Hate Speech Detection*. Columbia University. **ACL-IJCNLP 2021 Workshop: Understanding Implicit and Underspecified Language**.

2020 **Daniel Li**, Te I, Naveen Arivazhagan, Colin Cherry, Dirk Padfield. *Sentence Boundary Augmentation For Neural Machine Translation Robustness*. Google Research. **ICASSP 2021**.

**Daniel Li\***, Jennifer Chen\*, Qiang Ma, Andrew Liu, Justin Cheung, Yubin Xie, Herman Gudjonson, Dana Pe'er, Itsik Pe'er. *Counterfactual Hypothesis Testing of Tumor Microenvironment Scenarios Through Semantic Image Synthesis*. Columbia University, Google, Memorial Sloan Kettering Cancer Center. **BioArXiv**.

2019 Justin M. Cheung, Hanan Baker, **Daniel Li**, Daniel Stor, Daniel A. Heller. *Abstract 1719: Drug-loaded porphyrin nanoparticles as a platform for targeted and photodynamic combination therapy*. Memorial Sloan Kettering Cancer Center. **American Association for Cancer Research**.

2017 **Daniel Li**, Asim Kadav. *Adaptive Memory Networks*. University of California, Berkeley, NEC Laboratories America. **ICLR 2018**.

## Patents

2020 *System and method for faster interfaces on text-based tasks using adaptive memory networks*. Patent Number: 10853575. Asim Kadav, **Daniel Li**. NEC Laboratories America.

## Skills

|               |                                                                                                                                                                                        |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programming   | Python, PyTorch, TensorFlow, Scikit-Learn, NumPy                                                                                                                                       |
| Finance       | Trading (equities, commodities, digital assets), Technical Analysis, Fundamental Analysis, Algorithmic Trading, Venture Capital (valuation, go to market, etc.), Risk & Tax Compliance |
| Design/UI/UX  | Graphic Design (Figma, Omnigraffle), Ideation, Interviewing, Iterating and Prototyping, Pitch Deck and Presentation Design, Typography                                                 |
| Miscellaneous | Public Speaking, <i>Actual</i> Attention to Detail, Teaching, Open Ended Research, Technical Writing, Firearms (Rifle, Pistol, Night Vision)                                           |

## Awards

|      |                     |
|------|---------------------|
| 2022 | Google Cloud Grant  |
| 2020 | Google Cloud Grant  |
| 2019 | Ph.D. Service Award |
| 2018 | ICLR Travel Grant   |
| 2017 | NVIDIA Grant        |

## Service and Reviewing

2022 User Interface Software and Technology **UIST**, Empirical Methods in Natural Language Processing **EMNLP**

## Selected Coursework

Theory Algorithms & Uncertainty, Beyond Worst Case Analysis, Combinatorial Algorithms, Computational Geometry

AI/ML Artificial Intelligence, Computer Vision, Graphical Models, Deep Learning

Applications Machine Learning for Functional Genomics, Statistical Genomics, Computational Photography, User Interface Design and Development

Miscellaneous Entrepreneurship, Cybersecurity Venture Capital, Data and Ethics, Public Speaking, U.S. Education Institutions, Critical Studies in Education, The Southern Border

## Miscellaneous

2022 5 star Uber passenger rating

2021 Able to see in the dark, DTNVG (L3 20UA WP)