Curriculum Vitæ

Alex Mei
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Education

2022 - 2023 M.S. in Computer Science, Machine Learning
University of California, Santa Barbara
Thesis Title: "Building Safe and Transparent AI Systems"
Advisor: William Yang Wang
Add'l Committee Members: Xifeng Yan, Shiyu Chang

2019 - 2022 B.S. in Computer Science, College of Engineering
University of California, Santa Barbara
4.00 GPA, Highest Honors, Distinction in the Major
Advisor: William Yang Wang

Experience

- **Two Sigma** — AI Core
  Research Scientist Intern, Summer 2022
  Explored the influence of noisy features to predict market impact by leveraging modern deep neural network technologies. Returning as a full-time AI Research Scientist in Summer of 2023.
- **Benchling** — Machine Learning and Insights
  Software Engineering Intern, Spring 2022
  Implemented a non-linear regression outlier detection algorithm using significance tests on residuals in a robust regression fitting. Engineered a full-stack solution (React/Typescript/Python) to enable users to detect and exclude outliers automatically from their data.
- **Amazon** — AWS Workspaces
  Software Engineering Intern, Summer 2021
  Scoped, designed, and implemented an internal billing auditing API to provide customers with insightful data usage metrics. Leveraged AWS microservices (i.e., DynamoDB, Lambda, API Gateway) to improve existing Java-based billing service.
- **Procore** — Business Systems Engineering
  Software Engineering Intern, Spring 2020 - Spring 2021
  Delivered solutions to support new pricing models for a React on Rails pricing calculator used by 500+ sales reps during negotiations. Devised Python scripts to automate data integrations impacting 10K+ records between business systems such as Zuora and Salesforce.

Publications

- **Alex Mei**, Sharon Levy, William Yang Wang, "A Multimodal Approach to Fostering AI Safety Awareness in the Age of Internet Challenges."
- **Alex Mei**, Sharon Levy, William Yang Wang, "Investigating the Robustness of Large Language Models in AI Safety."
- **Alex Mei***, Michael Saxon*, Shiyu Chang, Zachary Lipton, William Yang Wang, "Users are the North Star for AI Transparency," **arXiv Preprint 2023**.
- Daniel Rose*, Vaishnavi Himakunthala*, Andy Ouyang*, Ryan He*, **Alex Mei**, Yujie Lu, Michael Saxon, Chinmay Sonar, Diba Mirza, William Yang Wang, "Visual Chain of Thought: Bridging Logical Gaps with Multimodal Infillings," **arXiv Preprint 2023**.
- **Alex Mei***, Sharon Levy*, William Yang Wang, "Foveate, Attribute, and Rationalize: Towards Safe and Trustworthy AI," **arXiv Preprint 2022**.
- **Alex Mei***, Anisha Kabir*, Sharon Levy, Melanie Subbiah, Emily Allaway, John Judge, Desmond Patton, Bruce Bimber, Kathleen McKeown, William Yang Wang, "Mitigating Covertly Unsafe Text within Natural Language Systems," **EMNLP 2022 Findings**, Abu Dhabi, United Arab Emirates.
- **Alex Mei**, Anisha Kabir, Rukmini Bapat, John Judge, Tony Sun, William Yang Wang, "Learning to Prioritize: Precision-Driven Sentence Filtering for Long Text Summarization," **LREC 2022 Proceedings**, Marseille, France.

Teaching

- UCSB CS 190I: Natural Language Processing (Python)
  Head Teaching Assistant, Spring 2023, upper-division, 100 students
- UCSB CS 165B: Machine Learning (Python)
  Head Teaching Assistant, Winter 2023, upper-division, 130 students
- UCSB CS 16: Problem Solving with Computers (C++)
  Graduate Teaching Assistant, Fall 2022, lower-division, 150 students
- UCSB CS 8: Introduction to Computer Science (Python)
  Undergraduate Learning Assistant, Spring 2020, lower-division, 130 students

Mentoring

- David Wang (UCSB Computer Science, 2023 - present)
- Ryan He (UCSB CCS Computing, 2022 - present, *Regents Scholar*)
- Danny Rose (UCSB Computer Science, 2022 - present)
- Vaishnavi Himakunthala (UCSB Computer Science, 2022 - present)
- Andy Ouyang (UCSB Computer Science, 2022 - present)
- Matthew Ho (UCSB Computer Science, 2021 - present)

Projects

- **Alexmeicooking**
  Founder, Summer 2017 - present
  Found a modern React/Flask/Postgres cooking site featuring over 100+ recipes with nutrition analysis to promote healthy home cooking. Achieve 100,000+ monthly social media engagements and 900+ active users from over 40 countries.
- **SmartGrid**
  Scribe, Fall 2021 - Winter 2022
  1st Place Computer Science Capstone Project sponsored by AgMonitor. Built an personalized AI microgrid management system to help users efficiently control their renewable generation to mitigate cost and greenhouse emissions.

Leadership + Volunteering

- **CodePath** — UCSB Division
  Co-Founder, Fall 2020 - Spring 2021
  Piloted CodePath at UC Santa Barbara, teaching 16 students iOS design principles and app development with Swift. Cultivated students' capstone projects from design to implementation, employing Agile practices for clarity and efficiency.
- **UC Santa Barbara** — Robotics Club
  Software Team Lead, Spring 2020 - Spring 2021
  Designed 12+ technical workshops to empower members of all majors with foundational software and robotics concepts for success. Led 20+ members in small team project development, exploring the intersections of machine learning and robotics.
- **Santa Barbara City Library** — Tech Tuesday
  Volunteer Instructor, Spring 2020
  Designed, built, and employed an Arduino-based "Wheel of Fortune" Game to teach community members the building blocks of Electrical and Computer Engineering encompassing circuitry and software programming. Guided children ages of 7 to 11 through the phases of ECE project development, from design to implementation.

Awards

- Outstanding Senior (UCSB Computer Science, 2022).
- Undergraduate Research Excellence (UCSB Computer Science, 2022)
- Capstone Best Project (UCSB Computer Science, 2022)
- Glen Culler Scholarship (UCSB College of Engineering, 2020, 2022)
- Honors Program (UCSB College of Engineering, 2020 - 2022)

Invited Talks

- UCSB CS 190I Natural language Processing Lecture, *on Responsible AI* (2023)
- UCSB WICS Early Research Scholars Panel, *on Research* (2023)
- UCSB CS 110 Research Methods Panel, *on Research* (2021)
- UCSB Discover Engineering Panel, *on College* (2020, 2021)

Coursework

- Specialized: Deep Learning, Natural Language Processing, Computer Vision, Adversarial Machine Learning, Classical Machine Learning, Information Retrieval
- Core: Data Structures, Algorithms, Linear Algebra, Vector Calculus, Discrete Math

Skills

- Programming: Python, C++, Ruby, Java, Javascript, SQL, HTML, CSS
- Toolbox: Git, Jupyter, AWS, Huggingface, Pytorch, Tensorflow, Pandas, Matplotlib, Tableau, React, Rails, Flask, Selenium, Postman