

Education

San Diego, CA	UC San Diego	Expected Graduation: June 2024
<ul style="list-style-type: none">• B.S. in Computer Science with Minor in Linguistics. GPA: 3.98/4.0• CS and Math Coursework: Statistical NLP, Deep Learning for NLU, Intro to Computer Vision, Advanced Data Structures, Multivariable Calculus, Linear Algebra, Statistical Methods (4.0/4.0 for all)• Graduate Coursework: Principles of AI: Probabilistic Reasoning and Learning (4.0/4.0)• Languages and Tools: Python, Java, C++, C, VSCode, Huggingface, Pytorch, Pandas, Numpy, LaTeX		

Research Experience

Undergraduate Researcher	UCSD CSE Department	June 2022 - Present
<ul style="list-style-type: none">• Advisor: Dr. Mai ElSherief• Used classical and transformer-based machine learning models to create classifiers for identifying risk factors related to problem gambling and burnout. Scraped and processed over 400,000 natural language posts from online communities on Reddit. Developed a codebook to annotate risk factors displayed by Reddit posts. Presented at the UC San Diego Summer Research Conference and UC LEADS Symposium.		

Undergraduate Researcher	UCSD CSE Department	September 2021 - June 2022
<ul style="list-style-type: none">• Advisors: Dr. Tzu-Mao Li and Dr. Ravi Ramamoorthi• Worked in a team of undergraduates to explore the effects of regularization and hyperparameters on 3d scene reconstruction. Modified existing state of the art inverse rendering pipelines to control which regularization techniques are used. Presented at the end of year UC San Diego Undergraduate Research Symposium.		

Undergraduate Researcher	UCSD CSE Department	January 2021 - June 2021
<ul style="list-style-type: none">• Advisor: Shuyang Li• Created a Bidirectional LSTM for fake news classification. Performed tokenization and stemming on over 44,000 fake and real articles and headlines. Replicated the results of a recent study using the Bi-LSTM.		

Publications

-
- **Andrew Oabel**, Nazanin Sabri, Jenelle Truong, Vivian Dang, Samir Rashid, Artur Rodrigues, Marissa Lee, and Mai ElSherief (2023), “Detecting Risk Levels in Problem Gamblers Through Online Communities on Reddit,” (preprint).
 - Jenelle Truong, Nazanin Sabri, Vivian Dang, **Andrew Oabel**, Samir Rashid, Artur Rodrigues, Marissa Lee, and Mai ElSherief (2023), “Examining Mental Burnout Discourse Across Reddit Online Communities,” (preprint).

Presentations and Posters

-
- UC LEADS Conference, La Jolla, CA, April 2022. **Oabel, A** “Detecting Risk Levels in Problem Gamblers Through Online Communities on Reddit” (poster).
 - **Received honorable mention** (~top 15/75 presentations)
 - Summer Research Conference, La Jolla, CA, August 2021. **Oabel, A** “Detecting Risk Levels in Problem Gamblers Through Online Communities on Reddit” (presentation).
 - Undergraduate Research Symposium, La Jolla, CA, May 2021. **Oabel, A**; Liu, M; Sazzad, N “Observing the Peaks and Troughs of Inverse Rendering” (poster).

Honors and Awards

-
- Google CS Research and Mentorship Program (CSRMP) Scholar, Google (2022)
 - UC LEADS Scholar, University of California (2022)
 - Regents Scholar, UC San Diego (2020)
 - Warren College Honors Society Member, UC San Diego (2020-Present)
 - Provost Honors, UC San Diego (2020-Present)

Technical Projects

- **Custom RISC Microprocessor** (2023). Developed a RISC Microprocessor with a custom architecture, ISA, and assembler to execute error detection and pattern matching programs. Python, Verilog, Custom Assembly
- **Social Compass App** (2023). Developed an app using agile development in a team of six undergraduates that displays the locations of users and their friends relative to position, orientation, and distance. Android Studio, Java, SQL
- **Clickbait Detector** (2022). Developed and utilized a BERT-based deep learning model and conducted hyperparameter tuning to detect clickbait headlines and misinformation. Python, Huggingface, Pandas
- **Idiom Detector and Translator** (2022). Utilized Hugging Face Transformers such as BERT and PEGASUS to detect English idioms and translate them to their literal meanings. Python, Huggingface, Pandas
- **Portal Video Game** (2019). Developed a 2d action puzzle platformer in Java. Utilized game design concepts to develop 7 levels complete with animation, music and sound effects. Java, LibGDX

Teaching and Mentorship

Undergraduate Tutor	UCSD CSE Department	September 2021 - Present
----------------------------	----------------------------	---------------------------------

- Utilized visualizations and socratic questioning to explain concepts in one-on-one and group settings. Graded students' homework and assignments, gave constructive feedback, and recommended supplementary resources.
- Tutored Discrete Mathematics (Fall 2021), Introduction to Programming II (Winter 2022), and Tutor Apprentice (Spring 2022, Fall 2022, Winter 2023)

Lead Peer Mentor	UCSD CSE PACE	September 2022 - Present
-------------------------	----------------------	---------------------------------

- Introduced advanced computer science topics such as interdisciplinary computing, machine learning, and AI ethics to a cohort of first year students as a part of the CSE Peer-led Academic Cohort Experiences (PACE) program. Created a safe space for a diverse group of students to comfortably share ideas and collaborate.
- Served as Lead Peer Mentor Fall 2022, Winter 2023, and Spring 2023.

Mentor	UCSD Scholars Society	October 2022 - Present
---------------	------------------------------	-------------------------------

- Served as a mentor to first year Regents and Jacobs scholars navigating UCSD and the CSE Department. Held socials and other gatherings to discuss residential life, academic and career advice, and other various topics.

Outreach

- Experienced Tutor Panel, CSE Department at UC San Diego (March 2020)
- CSE DEI Imposter Syndrome Panel, CSE Department at UC San Diego (May 2020)

Membership

- UC San Diego Scholars Society Member (2020-Present)
- ACM @ UCSD Member (2020-Present)
- UCSD Computer Science and Engineering Diversity, Equity, and Inclusion Member (2021-Present)
- Kaibigang Pilipin@ Member (Filipino Culture Club) (2020-2021)

References

Dr. Mai ElSherief - melsherief@ucsd.edu
Assistant Teaching Professor, Computer Science and Engineering Department at UC San Diego
Relationship: Faculty Advisor
9500 Gilman Drive
La Jolla, CA 92093

Dr. Mia Minnes - minnes@ucsd.edu
Associate Teaching Professor, Computer Science and Engineering Department at UC San Diego
Relationship: Professor, Tutoring Course Instructor (Discrete Mathematics, Tutor Apprentice)
9500 Gilman Drive
La Jolla, CA 92093