Kate Stadler

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EDUCATION

University of California, San Diego   **Sept 2022 - Jun 2026**
BS, Cognitive Science: Machine Learning and Neural Computation   3.8 GPA | 6x Provost Honors
    Computer Science Minor
Relevant Coursework: Data Science in Practice | Research Methods & Statistical Analysis | Supervised & Unsupervised Machine Learning | AI Algorithms, Deep Learning, Advanced Data Structures, Algorithms (Winter 2025)

WORK EXPERIENCE

Academic Achievement Hub, La Jolla, California   **Dec 2023 - Present**
Data Management Assistant (JavaScript, Java, spreadsheets)
- Built, optimized, and documented data pipelines and dashboards in JavaScript and spreadsheets
- Reduced manual processing time by 90% and enabled data-driven decision making
- Created and maintained data operations that monitor the tutoring center's performance and inform workflow optimization
- Collaborated with tutors, supervisors, and fellow operations assistants to assess needs and provide tailored solutions

Computer Science Department @ UCSD, La Jolla, California   **May 2023 - Mar 2024**
CS Tutor (Python)
- Able to quickly understand and debug student code, providing clear guidance to resolve issues effectively (100+ projects)
- Worked with course instructors to improve Python course curriculum based on observed student difficulties

Computer Science Department @ UCSD, La Jolla, California   **May 2023 - Mar 2024**
Research Assistant (Python, Markdown)
- Conducted research on network structures, probabilistic models, and parameterization for end-to-end epidemic simulations
- Created and structured configuration files based on literature reviews to be used in the final simulation product
- First-authored a 15-page pre-print focused on the rationale behind disease-specific parameters and making the use and analysis of complex simulations more intuitive (https://doi.org/10.1101/2024.06.10.24308702)
- Received positive feedback from UCSD bioinformatics experts

Computer Engineers of the Next Generation, Los Altos, California   **Aug 2020 - Jun 2022**
CS Tutor (2020), VP of Operations and Head Teacher (2021), President (2022)
- Completed over 200 hours of tutoring for Java, Python, JavaScript, and Scratch with a focus on accessibility and engagement
- Pioneered, designed, and implemented our first Java curriculum (for AP CS prep), leading a team of tutors through its first cohort
- Organized team meetings, instructional workshops, Hour of Code events, and Hackathons, reaching 4000+ students aged 6 - 18
- **Awards: Presidential Service Volunteer Award (Silver) | Teacher of the Year**

T4, Los Altos, California   **Apr 2020 - Sept 2023**
Barista
- Provided excellent customer service, performed inventory, closing duties, and trained new employees

TECHNICAL PROJECTS

NFL Play-by-play (PBP) Analysis with ML
- Analyzed NFL's PBP dataset, using Python/BERT to encode play descriptions and hierarchical clustering to categorize plays
- Explored turnover prediction by integrating encoded descriptions and additional variables adapted from the dataset
- Applied data analysis techniques including data cleaning, processing, encoding, and visualization
- Communicated findings through visualizations and presentations that effectively highlighted patterns

Scheduling and Information Retrieval Program (for Content Tutoring Center @ UCSD)
- Designed and implemented a tool (Java) to streamline scheduling and data retrieval, increasing efficiency and usability for staff
- Working to make it a full stack application with Node.js, MongoDB, and a front-end with HTML, CSS, and JavaScript

Comparison of Supervised Learning Algorithms (scikit-learn)
- Used cross-validation to compare performance of logistic regression, support vector machine, and k-nearest neighbors with several partitions and hyper parameters for multiple datasets, finding that SVM performed the best, followed by k-nearest neighbors and logistic regression

Airbnb Exploratory Data Analysis (EDA)
- Used EDA to evaluate success factors in Airbnb listings, finding that location factors do not correlate with ratings
- Leveraged pandas, matplotlib and numpy to visualize data

LEADERSHIP

Student Representative for Revelle College @ UCSD
- Engage in college governance and decision-making, advocating for student needs

SKILLS

Java, Python, JavaScript, pandas, scikit-learn, numpy, matplotlib, seaborn, C, HTML, CSS, Shell Script, Git, MongoDB, data visualization/cleaning, workflow automation, user-centered design, project management, code review, data visualization