Karina Chen

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Education

University of California, San Diego — La Jolla, CA
Bachelor of Science in Data Science, Minor in Design — *Sept. 2020 – Mar. 2024*

- GPA: 3.98
- Relevant coursework: Calculus & Analytical Geometry, Data Analysis & Inference in R, Data Management, Data Structures & Algorithms, Data Visualization, Deep Learning, Image Processing, Interaction Design, Linear Algebra, Machine Learning, Mathematical Statistics, Probabilistic Modeling and ML, Recommender Systems & Web Mining, Representation Learning, Systems for Scalable Analytics
- Honors: Magna Cum Laude, Provost Honors (every quarter)

Experience

American Express — Sept. 2024 – Present
Software Engineer — *Phoenix, AZ*

- Driving Global Compliance Intelligence platform modernization efforts within the data engineering team, utilizing Google Cloud Platform (GCP), Python, and SQL to enhance data consolidation workflows
- Designing and developing test automation framework to streamline test case execution, with a focus on implementing comparison functionality between technology and data management teams
- Conducting comprehensive testing, including unit tests to verify code accuracy, system integration tests in tandem with data extraction team, and developing parameterized component tests to validate functionality in the local environment

American Express — Jun. 2023 – Aug. 2023
Software Engineer Intern — *Phoenix, AZ*

- Led planning and developed enhancements for an internal Financial Strategy Tool on the Financial Data Engineering scrum team following the Agile methodology
- Designed and implemented application home page featuring adaptive navigation to internal pages and external applications using React.js, HTML, and CSS
- Identified and corrected data discrepancies from backend JSON output and configured dynamic page layout and tooltips for displaying information on data dashboard
- Built custom AI chatbot using RASA framework that can answer 30+ application FAQs to improve usage efficiency and domain understanding

Projects

Diffusion Models for Image Generation | *Python, Pytorch, Git* — Sept. 2023 – Mar. 2024

- Implemented diffusion models for data science capstone project under the mentorship of Alex Cloninger and Rayan Saab
- Clarified the diffusion process using a spiral distribution in Pytorch (github)
- Investigated how the 3D properties of depth, saliency, and illumination are encoded within the internal activations of latent diffusion models using linear probing (website)

Analysis and Prediction of Survivor Winners (link) | *Python, pandas, numpy, scikit-learn* — Aug. 2023

- Converted survivoR data package from R to Python datasets, cleaned data, and restructured data frames by merging and dropping columns in order to analyze all 42 seasons and 626 contestants of the show Survivor
- Used pandas, numpy, scikit-learn, matplotlib, and seaborn to clean dataframes, perform feature engineering, and apply models to predict Survivor season winners

Technical Skills

Languages: Python, SQL, Java, JavaScript, HTML/CSS, R, LaTeX
Developer Tools: Git, Google Cloud Platform (BigQuery, Airflow), VS Code, Jupyter Notebook, Microsoft Office, Rally
Frameworks: pytest, React
Libraries: pandas, NumPy, Matplotlib, scikit-learn, D3