Sid Mundra

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EDUCATION

- **University of California San Diego – B.S. in Computer Science**   *Expected graduation: June 2026*
- **Courses**: Data Structures and Algorithms, Operating Systems, Natural Language Processing, Recommender Systems, Computer Networks
- **Societies and Clubs**: IEEE, Unmanned Aerial Vehicles, Student Council Diversity Advocate, Sustainable Investment Group at UCSD (**Quant** Analyst)

PROFESSIONAL EXPERIENCE

Fintaar AI, *Software Engineer Intern*   Pune, India (Jul 2024 – Present)
- Engineered an **NLP model with 91% accuracy** to verify any Indian government-issued identity, developing a robust **anti-forgery application** using computer vision technologies like **DocTR, TensorFlow, and Keras**
- Leveraged **ngrok** for secure tunneling to ensure safe communication between the API and scripts, maintaining **data integrity** and confidentiality throughout the verification **pipeline**
- Designed and implemented a comprehensive **API testing framework** using Postman, employing techniques such as **pixel analysis, metadata verification, color consistency checks, steganography detection**, and **noise consistency evaluation** to enhance document authenticity detection

Cumulus Systems - A Hitachi Group, *Software Engineer Intern*   Pune, India (Jul 2023 – Sep 2023)
- Automated the **analysis of log reports** to pinpoint errors within the Measure Analyze Recommend Solve (MARS) tool, a high-performance analytics engine; Ensured high code sustainability and future scalability by utilizing debugging and **version control** tools (**GIT**) extensively
- Used the **POSIX Regular Expressions Library** along with **Apache POI** to write 1000+ lines of code which can read 15,000+ log files, producing detailed MS Excel visualizations identifying trend irregularities
- Leveraged **agile** methodologies to drive the **iterative development** process; Contributed to the design and implementation of advanced **error detection algorithms**, improving the accuracy and efficiency of log analysis by 20% and troubleshooting time by 15%

Integrated Procure-to-Pay Services – UC San Diego Financial Services, *Corporate Card Associate*   San Diego, CA (Feb 2023 – Present)
- Processed and evaluated 20+ credit card applications daily, making informed decisions on **approvals** or **rejections**, ensuring accuracy and compliance with **financial regulations**
- Managed the **end-to-end** credit card issuance process through the US Bank Access Online portal, including coordinating with the bank for card dispatch and resolving **customer service** inquiries regarding card delivery issues.
- Optimized customer support **workflows**, leading to an increase in response time efficiency, enhancing customer satisfaction and service; **Troubleshooted** issues and provided daily support through applications such as **SAP Concur**, **Oracle Financial Cloud**, **ServiceNow**

PROJECTS

SpoilerShield – Spoiler Detection System using ML
- Architected a **multi-stage NLP pipeline** to preprocess and balance 56,000+ book reviews for **spoiler classification**, leveraging advanced **stratified sampling** and **custom tokenization** strategies to address severe class imbalance.
- Fine-tuned **DistilBERT** with **Hugging Face's Transformers** library, optimizing contextual embeddings and hyperparameters to achieve an **84% precision rate** and a 15% false negative rate, outperforming traditional classification models.
- Performed in-depth comparative analysis with baseline approaches **(Bag of Words, TF-IDF + Logistic Regression),** incorporating **dynamic ROC AUC optimization** and weighted loss functions to validate the system's scalability and accuracy.

AlgoTraderX – Quantitative Trading Algorithm
- Engineered a **quantitative trading algorithm** that integrates **Momentum Trading**, **Support Vector Machine**, **Classifiers**, **Random Forest models**, and **Trend Following strategies** with a weighted decision-making system analyzing over 10,000 stock data points
- Developed a comprehensive **backtesting framework** using **Pandas** and **NumPy** to simulate trading strategies over 5 years of historical and synthetic data, evaluating model accuracy, profitability, and risk; resulting in a 25% increase in model precision
- Improved computational efficiency by 20% through **fine-tuned ML** models; leveraged **Matplotlib** to visualize portfolio performance

QUADspeaker – Twitter Bot
- Developed a Twitter bot using the **Tweepy API** to automatically post the latest news stories from four sources, including CNN, BBC and Al-Jazeera; posting **50 times a day** with tailored, user-engaging content
- Integrated **OpenAI API** to paraphrase and enhance the appeal of news headlines, ensuring engaging and dynamic content for daily posting, incorporating **error handling and logging** for efficient web scraping and image management
- Employed Python's **schedule** library to manage regular execution of **news scraping**, tweeting, and daily summaries, ensuring timely and consistent updates while maintaining robust tracking of posted content and images to **prevent duplication**

Virtualis Nutrix – Mobile Application
- Developed mobile application with **Flutter** and **Dart** to assist the elderly in my community during the lockdown using **Android Studio**
- Engineered a secure backend using **Google Firebase** for data storage and real-time data synchronization. Ensured user data security by implementing a **secure login system** for individual **cloud-based data storage** as well as two factor authentication
- Established **CI/CD** pipeline to automate testing and deployments, ensuring code quality with **Gitlab**

LANGUAGES/ TECHNOLOGIES

Python, Java, Javascript, C, Git, Android Studio, Flutter, CSS, HTML, Flask, C++, Google Firebase, SQL, AWS, Microsoft Office Suite, Verilog, CI/CD, R, Bash