

Arsum Nadeem Chaudhary

Greater LA Area | anna2021@mymail.pomona.edu | [LinkedIn](#) | [GitHub](#)

EDUCATION

Pomona College, Claremont, CA

Expected Graduation: Jun 2025

Double Major of Bachelors of Arts in Computer Science and Mathematics | 3.9 GPA

Relevant Coursework: Data Structures, Algorithms, Big Data, Managing Complex Systems, Artificial Intelligence, Neural Nets, Computer Languages and Theory, Advanced Linear Algebra, Operations Research, Biostatistics, Probability, Combinatorics, Vector Calculus

SKILLS

Languages *Proficient* Python(5yrs) · SQL(2yrs) *Intermediate* Javascript(2yrs) · Java(2yrs) · C/C++(2yrs) *Beginner* R(1yr) · Haskell/SML(1yr)

Software AWS · Docker · OpenCV · TensorFlow · JupyterNotebook · Git · Bash · React · Flask · Pandas · Jira · MS Office

EXPERIENCE

Software Engineering Resident

Sep 2024 - Present

[Headstarter](#)

Remote

- Built **3+ machine learning**, ai-engineering and full-stack projects in fast-paced software team environments
- Developed 5+ neural networks in Python, 4 apps in Typescript on AWS/Vercel with dev and **production environments**
- Implemented llm-chaning, hyperparameter tuning, fine tuning on **10+ LLM** models controlling for latency & accuracy
- Coached by Google Machine Learning, Google Kubernetes, Two Sigma, Tesla, Figma and Citadel **Engineers**
- Created **100+ commits** on github with 7-day deadlines getting a Career Capital increase of **20%** from start date

Software Engineering Intern

Sep 2023 - Dec 2023

[Learning Economy Foundation](#)

Washington, DC

- Designed & implemented **ChatGPT plugin** architecture for LearnCard - LEF's novel all-purpose Web 3 education wallet
- Enhanced LearnCard's Boost Feature with **automated** previews using OpenAI function calling, reducing processing time by **60%** for 5k+ daily users
- Optimized verification speed and scalability to support real-time **credential access** for rapidly growing user base

Software Engineering Intern

Jun 2023 - Aug 2023

[Inabia Software and Consulting](#)

Redmond, WA

- Developed **3 data extraction pipelines**, processing 1TB of health data with 20% increase in data processing proficiency
- Improved text classification accuracy by 15% and reduced **translation error** by 20% for 500k enquiries from client side
- Enhanced **data accuracy** to enable clients to make informed health decisions with confidence in high-stakes scenarios

AI/ML PROJECTS

Brain Tumor Classification | Open-Source Project (~15 hours) - [GitHub](#)

Dec 2024 - Jan 2025

- Used **neural networks** in Python to classify 1000 MRI scans into 3 types of possible brain diseases with custom model
- Generated multimodal MRI reports for neurosurgeons in under **200MS** after image classification, construction & training

Twitter Clone Web Application | Personal Project (~85 hours) - [GitHub](#)

Apr 2024 - May 2024

- Developed a full-stack web app using **Flask** and PostgreSQL to feature million row scalable database with optimized indexes
- Utilized **Docker**, Nginx, and Unicorn for production environment and deployment, created CI/CD pipelines with GitHub
- Actions, & implemented user authentication, CRUD operations, and **full-text search** with relevance ranking

WebOps VM Management | Team Project (5 engineers) (~150 hours)

Feb 2024 - Mar 2024

- Integrated and maintained VM with **PostgreSQL**, Tomcat, and JVM; set up SSL, NewRelic and PagerDuty monitoring
- Automated **reboot tests** and scaled system using Load Balancer, Elastic File System, and Relational Database to support 1000+ users with 10,000+ RPM at **<1% error rate** and <500ms response time for 15 minutes
- Gained skills in error diagnosis from complex input information, **24/7** availability scheduling, and meticulous note keeping

Coronavirus Twitter Analysis Project | Personal Project (~15 hours) - [GitHub](#)

Jan 2024 - Feb 2024

- Analyzed **1.1b** tweets in parallel to identify **sentiment** trends in 10+ languages across 20+ countries
- Created **4 critical visuals** to comprehend pandemic reactions to inform better response for global health communication

P-Fraud, P-ai, Claremont Colleges AI Club | Team Project (~30 hours) - [GitHub](#)

Jan 2023 - Apr 2023

- Collaborated with team of 6 to build and test models to predict **financial fraud** with 94% accuracy on 500K records
- Utilized **SVM**, Random Forest, and XGBoost techniques on the IEEE dataset for comparative results

Truck Driver's Face Recognition and Drowsiness Detection System | Personal Project (~75 hours) - [GitHub](#)

Jan 2023 - Mar 2023

- Utilized ANN, KNN ML models and **OpenCV**, HAAR features, Eye Aspect Ratio, for accident prevention at wheel
- Achieved **97%** detection rate via alarm system with Twilio messaging and email for drowsy notification in real time

Activities

UCLA Datafest - Led team of 6 to present policy recommendations for enhancing customer satisfaction in pro bono cases

Nov 2024

analyzing with R and Pandas around 450k+ data points from the American Bar Association