

AARUSH VERULKAR

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EDUCATION

Master of Science, Computer Science

University of Southern California

Expected May 2026

Bachelor of Engineering, Computer Engineering (Honours in AI/ML)

Mumbai University

August 2020 - July 2024

CGPA: 9.21/10

SKILLS

Programming Languages

Python, Java, C, SQL, R, Solidity, Prolog

Web Technologies

HTML, CSS, JavaScript, ReactJS, Django, MongoDB, PostgreSQL, MySQL

ML and DS

NumPy, Pandas, PyTorch, Matplotlib, Seaborn, Keras, Tensorflow, Scikit-Learn, SciPy, OpenCV

Other Technologies

Tableau, Excel, MS Suite, Git, Hadoop, AWS, Docker

EXPERIENCE

Data Analyst Intern

June 2023 - July 2023

Bulk Material Handling Technologies

- Collaborated within the analytics team to evaluate GPS data of **150** utility vehicles; findings informed strategic route optimizations, achieving an estimated reduction of **three** hours in overall weekly travel time across operations.
- Facilitated the use of Python scripts to parse and visualize GPS data packets, reducing manual processing time by **50%** and uncovering insights that improved vehicle deployment efficiency by **20%**.

PROJECTS

Intellihealth: Intelligent Health Record System

Python, Angular, TypeScript, Solidity, ExpressJS, NodeJS, Django

- Created a Blockchain driven Electronic Health Record System, ensuring secure digital storage of medical documents and enhancing patient data accessibility by reducing retrieval time to **under 2 seconds** per document.
- Prepared secure smart contracts utilizing Solidity alongside industry-standard frameworks like Truffle and Ganache, resulting in a notable **40% improvement** to the integrity of digital health records stored on-chain.

Continual Learning: Mitigating Catastrophic Forgetting

Python, NumPy, Matplotlib, Avalanche, PyTorch

- Teamed up to conduct a thorough comparative analysis of Continual Learning techniques, concentrating on **EWC**, **Experience Replay** and **GEM**; mitigated catastrophic forgetting while enhancing image classification accuracy by **15%** across MNIST dataset.
- Established benchmarks for performance on **MNIST** and collated model performance metrics, achieving a **93%+ test accuracy** in joint training across contexts.

ConveCam

Python, NumPy, Matplotlib, OpenCV, TensorFlow, Darknet

- Collaborated with a team to design and implement a **smart conveyor belt system** using **YOLOv4** algorithm via Darknet framework, achieving **96%** accuracy in real-time object detection and classification based on visual attributes.
- Integrated the system into a miniature supply-chain industry model, improving processing efficiency by **40%** and reducing classification errors by **25%** compared to initial benchmarks.

BlogLang

Python, HTML, CSS, ReactJS, JavaScript, Django, DBSqlite3

- Architected and deployed a **full stack dual functionality** web application incorporating a comprehensive **blog platform** with a secure admin interface for content creators.
- Engineered an intuitive **language translation** service that processes text across **multiple languages**.

RESEARCH EXPERIENCE

Intellihealth: Intelligent Health Record System [\[Link\]](#)

IEEE ICBDS October 2024

- Researched a blockchain-based **decentralized** EHR system with role-based access control, integrating a patient-assisting chatbot and **ML models with 95%+ accuracy** for preliminary disease detection from medical imaging.

LEADERSHIP

Team CodeLabs CRCE, Mumbai, India

Marketing Analytics Head

- Managed a team of **15 junior members** in developing digital outreach initiatives, resulting in a **300-person** increase in our social media followers within a single month, which directly contributed to securing **200 participant registrations** for the Unscript 2k23 hackathon hosted by the team.