

PRAMIKA GARG

+91 81482 08354 ✉ micepram@gmail.com 🌐 [Portfolio](#) 📄 [/in/micepram](#) 🗣️ [/micepram](#) 🎓 [Scholar](#) 🆔 [ORCID](#)

EDUCATION

Vellore Institute of Technology

Sep 2020 – Jul 2024

Bachelor of Technology in Computer Science & Engineering, GPA: 8.8/10 · 3.91/4.0 🏆

Vellore, India

- **Merit Scholarship:** Ranked Top 10 / 2100 for 2 consecutive years. 🏆
- **Executive Board:** ACM / ACM-W VIT - Finance Head / Outreach Head.
- **IEEE VIT:** Senior Technical Committee Member · **MFC VIT:** Technical Committee Member.

EXPERIENCE

Qualcomm

Aug 2025 – Present

Software Engineer I

Hyderabad, India

- Engineered a **GenAI diagram-generation platform (Claude LLM + Docker + Kubernetes)** deployed to an engineering base of **10K+ users**; streamlined flows to drive a **30% reduction** in technical documentation time & coordinated rollout with Engineering, and QA.
- **Orion Award recipient** for leading **ETL pipeline migration** and co-developing an **AI-driven Regression Change Detector**, enhancing CI/CD traceability and boosting platform reliability.
- Owned **full-stack backend development** for multiple services in **Java**, conducting peer code reviews and enforcing **scalable architecture patterns** for the team.

Qualcomm 🏆

Jul 2024 – July 2025

Associate Software Engineer

Hyderabad, India

- Migrated **ETL pipeline** to distributed **RabbitMQ + MySQL** (metadata only), guiding cross-team adoption; introduced multi-worker processing and back-pressure scheduling, scaling throughput **1 TB to 10 TB/day** and eliminating Jenkins bottlenecks.
- Architected IoT load-simulation system on **AWS EKS + Kafka**, generating traffic for **250K+ devices** across 40+ teams; introduced adaptive partition balancing, cutting message latency by **40%**.
- Built **self-healing infrastructure** with automated reset logic and unified **Splunk/Grafana observability**; auto-recovered **97% of failures**, reducing incident resolution time by 30% and improving IoT device capacity **6× per host**.
- Developed unified OPA-based access control system in **Kubernetes** across **23+ APIs**; reduced misconfigurations by **65%** and streamlined secure onboarding for engineering teams.
- Designed and deployed **FastAPI + SQLAlchemy Proxy SQL gateway** for **5K+ concurrent clients**; implemented **KEDA-based autoscaling**, achieving **99.9% uptime** for parallel test workloads.

GE Aerospace 🏆

Jan 2024 – Jun 2024

Software Development Engineer Intern

Bengaluru, India

- Engineered a dynamic **Playwright based automation framework** for the Engine Change Tool, covering **40+ complex flows**; implemented logic to validate variable resultant data states, ensuring stability across diverse fleet scenarios.
- Optimized asset transfer workflows by eliminating manual validation loops, resulting in a **~95% reduction** in processing errors and saving **583 man-hours annually** for the support team.
- Collaborated with cross-functional QA teams to document workflows and validation logic, facilitating smooth knowledge transfer and accelerating feature delivery within an **Agile environment**.

Expedia Group 🏆

May 2023 – Jul 2023

Software Development Intern - Flights

Gurgaon, India

- Built from scratch a configurational **Maestro based framework**, with **30+ toggles**, covering the entire scope of user touch story for **Flights LOB**.
- Developed the complete suite of **UI and Flow based Test Cases** for the most used LOB in Expedia (i.e. Flights) which at a later stage we turned into a **Synthetic test suite** to monitor downtime of app specific APIs.
- Scaled solution across to **4 Business Units**, built comprehensive UI tests, enabling **5X faster test case development**, and enabling auto regression and synthetic testing made easily deployable via **GitHub Actions**.
- Worked on both **iOS And Android** code bases to build **Accessibility Identifiers** to make UI elements much more accessible and easy to implement in UI Test Cases.

EPFL (Swiss Federal Institute of Technology) 🏆

May 2022 – Jul 2022

Summer Research Scholar - Scalable Computing Systems Lab (SaCS Lab)

Lausanne, Switzerland

- Selected among the **top 2%** of global applicants for a fully funded fellowship to conduct **federated machine learning experiments** focused on distributed deep learning under resource constraints.
- Designed training loops and simulation pipelines to evaluate model performance on **heterogeneous data**; implemented **lightweight pre-processing** to mitigate bandwidth bottlenecks in realistic network environments.
- Optimized aggregation strategies and communication frequency, achieving an **18% improvement in convergence speed** and reducing mean network communication overhead by **23.2%**.

The D. E. Shaw Group 🏆

Oct 2021 – May 2022

DESIS Ascend Educare Fellow

Remote

- Selected as one of **40 fellows** from a pool of **6,200+ applicants (Top 0.65%)** for an exclusive 6-month mentorship program; received weekly technical guidance from senior DESIS engineers.
- Developed a fully fledged **Recruitment Content Management System (CMS)** in **Node.js**, designed to streamline candidate tracking and automate application workflows.
- Led a team to architect **Fin€fy**, a novel **fintech product** designed to revolutionize financial independence for homemakers; built the **backend infrastructure** and presented the MVP to firm leadership.

RESEARCH PUBLICATIONS

NOTE: All publications are *double-blind peer-reviewed*.

IEEE: 4th ICUIS, 2024 | iOS, ARKit, VisionOS | Cited by 1

Inventory Management in Augmented Reality Using Apple ARKit for VisionOS

IEEE: GCCIT, 2024 | Blockchain, NFTs, Smart Contracts

Leveraging BBTS and NFTs for Ethical Ticketing in Live Events

IEEE: 7th CSI-TSS, 2023 | Python, MNE, Signal Processing | Cited by 6

Harnessing Creative Methods for EEG Feature Extraction and Modeling

IEEE: 7th CSI-TSS, 2023 | 1st Author | Python, OpenCV, Dark Channel Prior | Cited by 1

Enhancing Visibility: Multiresolution Dark Channel Prior for Dehazing

IEEE: 4th ICRTCST, 2021 | 1st Author | Python, ML Models | Cited by 1

An Exhaustive Comparative Analytical Study of 15 Machine Learning Models

Springer: ICICIT, 2021 | 1st Author | Python, Algorithms, Parallel Computing | Cited by 2

Randomised Analysis of Backtracking-based Search Algorithms in Sudoku

Dec 2024

Gobichettipalayam, India

Oct 2024

Bengaluru, India

Nov 2023

Bengaluru, India

Nov 2023

Bengaluru, India

Feb 2022

Jamshedpur, India

Jan 2022

Vellore, India

HONORS & AWARDS

Qualcomm | Orion Award

Awarded for exceptional impact leading to early promotion.

EPFL | Summer Research Scholarship

Awarded 3,600 CHF funding; Selected Top 2% of global applicants.

Google | Generation Scholarship (APAC)

Awarded \$1,000 USD; Selected Top 180 / 20,000+ applicants (Selectivity: 0.9%).

Harvard University | WECODE Scholarship

Selected Top 250 / 5,000+ applicants (Selectivity: 5%).

Vellore Institute of Technology | Merit Scholarship

Ranked Top 10 / 2,100+ students for 2 consecutive years.

American Express | AI/ML Hackathon

Ranked 6th / 1,385 participants (Individual Track).

SUSE (CNCF) | Cloud Native Scholarship

Selected Top 325 / 15,000+ applicants (Selectivity: 2%).

Aug 2025

May 2022

Apr 2022

Mar 2022

2020 – 2022

Oct 2021

Jun 2021

PROJECTS

Digital Portfolio | HTML, CSS, JavaScript

- Designed and developed a **responsive portfolio** with custom animations, starfield background, and **smooth scroll transitions**.
- Built with **vanilla HTML/CSS/JS** without any frameworks, fully accessible with **semantic markup** and ARIA labels.

Parsify | Python 3, POSIX, Shell

- A logical parser of of the **POSIX standard** (IEEE Std 1003.1-2017) subset - Shell Token Recognition rules.
- Implements Section 2.3 of the **Shell Command Language** chapter, covering the unified **POSIX.1 Shell and Utilities** interface.

Jun 2025 - Nov 2025

Jan 2024 - Sep 2024

SKILLS

Languages: Java, Python, Swift, JavaScript, SQL, \LaTeX

Cloud & DevOps: AWS, GCP, Kubernetes, Docker, EKS, Terraform, CI/CD, Linux, Splunk, Grafana, Git

Backend & Databases: SpringBoot, FastAPI, Node.js, RabbitMQ, Kafka, MySQL, PostgreSQL

AI/ML: TensorFlow, OpenCV, Federated ML, LLMs, Jupyter, Tableau, Data Analytics

Mobile & Testing: iOS SwiftUI, XCode, Maestro, Playwright, Nightwatch.js, UI Automation, Test Automation

Leadership & Soft Skills: Technical Leadership, Mentorship, Cross-functional Collaboration, Agile/Scrum, Strategic Planning

CERTIFICATIONS

JP Morgan Chase | Software Engineering Virtual Experience

Postman | Student Expert

Goldman Sachs | Engineering Virtual Program

Coursera | Fine Tune BERT for Text Classification with TensorFlow

Google | Build and Secure Networks in Google Cloud

Google | Deploy to Kubernetes in Google Cloud

Google | Insights from Data with BigQuery

Google | Perform Foundational Data, ML, and AI Tasks

Google | Integrate with Machine Learning APIs

Google | Engineer Data in Google Cloud

Sep 2021

Aug 2021

Jul 2021

Jun 2021

Nov 2020

Nov 2020

Nov 2020

Nov 2020

Nov 2020

Oct 2020