

# PRAMIKA GARG

+91 81482 08354 ✉ [micepram@gmail.com](mailto: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 13+ 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 **93% of failures**, reducing incident resolution time by 30% and improving IoT device capacity **6x 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 of 4 to architect and build **Fin€fy**, a novel **fintech product** designed to revolutionize financial independence for home-makers; built the **backend infrastructure** and presented the MVP to firm leadership.

RESEARCH PUBLICATIONS

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

**IEEE: 4<sup>th</sup> 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: 7<sup>th</sup> CSI-TSS, 2023** | *Python, MNE, Signal Processing* | **Cited by 6** [🔗](#)

*Harnessing Creative Methods for EEG Feature Extraction and Modeling in Neurological Disorder Diagnoses*

**IEEE: 7<sup>th</sup> CSI-TSS, 2023** | **1<sup>st</sup> Author** | *Python, OpenCV, Dark Channel Prior* | **Cited by 1** [🔗](#)

*Enhancing Visibility: Multiresolution Dark Channel Prior for Dehazing and Fog Removal in Images*

**IEEE: 4<sup>th</sup> ICRTCST, 2021** | **1<sup>st</sup> Author** | *Python, ML Models* | **Cited by 1** [🔗](#)

*An Exhaustive Comparative Analytical Study of 15 Machine Learning Models For Automated Cardiovascular Disease...*

**Springer: ICICIT, 2021** | **1<sup>st</sup> Author** | *Python, Algorithms, Parallel Computing* | **Cited by 2** [🔗](#)

*Randomised analysis of backtracking-based search algorithms in elucidating sudoku puzzles using a dual...*

**Dec 2024**

**Oct 2024**

**Nov 2023**

**Nov 2023**

**Feb 2022**

**Jan 2022**

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.*

**The D. E. Shaw Group** | **DESIS Ascend Educare Scholarship**

*Awarded INR 50,000 stipend.*

**American Express** | **AI/ML Hackathon**

*Ranked 6<sup>th</sup> / 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**

**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 2025 - Sep 2025**

SKILLS

**Languages:** Java, Python, Swift, JavaScript, SQL, ~~TeX~~

**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**

## REFERENCE LINKS

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### Contact Info

**Email:** <mailto:micepram@gmail.com>

**Portfolio:** <https://micepram.github.io/>

**LinkedIn:** <https://linkedin.com/in/micepram/>

**GitHub:** <https://github.com/micepram>

**Google Scholar:** <https://scholar.google.com/citations?user=tOoW2mYAAAAJ>

**ORCID:** <https://orcid.org/0000-0002-2867-3421>

### Education

**VIT (Degree):** <https://micepram.github.io/files/Pramika%27s%20Resume.pdf>

**VIT (Scholarship):** <https://micepram.github.io/files/Pramika%27s%20Scholarship%20-%20VIT%20Y1.png>

### Experience

**Qualcomm (Offer):**

<https://micepram.github.io/files/Pramika%27s%20Congratulations%20-%20Qualcomm.pdf>

**GE Aerospace (Cert):**

<https://micepram.github.io/files/Pramika%27s%20Certificate%20-%20GE%20Aerospace.pdf>

**Expedia (Post):**

[https://www.linkedin.com/posts/micepram\\_expediagroup-internship2023-careerjourney-activity-7090723601976344577-cgoI](https://www.linkedin.com/posts/micepram_expediagroup-internship2023-careerjourney-activity-7090723601976344577-cgoI)

**EPFL (Acceptance):**

<https://micepram.github.io/files/Pramika%27s%20Congratulations%20-%20EPFL.pdf>

**D. E. Shaw (Post):**

[https://www.linkedin.com/posts/micepram\\_hey-everyone-after-4-rounds-and-2-vigorous-activity-6849953085092114432-t7UU](https://www.linkedin.com/posts/micepram_hey-everyone-after-4-rounds-and-2-vigorous-activity-6849953085092114432-t7UU)

### Research Publications

**IEEE (ICUIS '24): Inventory Management...** <https://ieeexplore.ieee.org/abstract/document/10867167/>

**IEEE (GCCIT '24): Leveraging BBTS...** <https://ieeexplore.ieee.org/abstract/document/10862756/>

**IEEE (CSI-TSS '23): Harnessing Creative...** <https://ieeexplore.ieee.org/abstract/document/10334244/>

**IEEE (CSI-TSS '23): Enhancing Visibility...** <https://ieeexplore.ieee.org/abstract/document/10334128/>

**IEEE (ICRTCST '21): An Exhaustive...** <https://ieeexplore.ieee.org/abstract/document/9781828/>

**Springer (ICICIT '21): Randomised analysis...** [https://link.springer.com/chapter/10.1007/978-981-16-6723-7\\_21](https://link.springer.com/chapter/10.1007/978-981-16-6723-7_21)

### Honors & Awards

**EPFL Scholarship:** <https://micepram.github.io/files/Pramika%27s%20Congratulations%20-%20EPFL.pdf>

**Google Scholarship:** <https://micepram.github.io/files/Pramika%27s%20Scholarship%20-%20Google.pdf>

**Harvard WECode:** <https://micepram.github.io/files/Pramika%27s%20Scholarship%20-%20Harvard%20WECode.pdf>

**VIT Merit:** <https://micepram.github.io/files/Pramika%27s%20Scholarship%20-%20VIT%20Y1.png>

**SUSE (CNCf):** <https://micepram.github.io/files/Pramika%27s%20Scholarship%20-%20SUSE%20&%20CNCf.pdf>

### Projects

**Portfolio:** <https://github.com/micepram/micepram.github.io/>

**Parsify:** <https://github.com/micepram/parsify>

### Certifications

**JP Morgan:**

<https://micepram.github.io/files/Pramika%27s%20Certificate%20-%20J%20P%20Morgan%20&%20Chase.pdf>

**Postman:**

[https://badges.parchment.com/public/assertions/1FzfhwJRSxul64gbQmWeIg?identity\\_\\_email=micepram%40gmail.com](https://badges.parchment.com/public/assertions/1FzfhwJRSxul64gbQmWeIg?identity__email=micepram%40gmail.com)

**Goldman Sachs:**

<https://micepram.github.io/files/Pramika%27s%20Certificate%20-%20Goldman%20Sachs.pdf>

**Coursera (BERT):**

<https://micepram.github.io/files/Pramika%27s%20Certificate%20-%20Coursera%20-%20Fine%20Tune%20BERT.pdf>

**Google (Networks):**

[https://www.skills.google/public\\_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/560328](https://www.skills.google/public_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/560328)

**Google (K8s):**

[https://www.skills.google/public\\_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/559957](https://www.skills.google/public_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/559957)

**Google (BigQuery):**

[https://www.skills.google/public\\_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/557266](https://www.skills.google/public_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/557266)

**Google (AI Tasks):**

[https://www.skills.google/public\\_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/561875](https://www.skills.google/public_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/561875)

**Google (ML APIs):**

[https://www.skills.google/public\\_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/562170](https://www.skills.google/public_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/562170)

**Google (Data Eng):**

[https://www.skills.google/public\\_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/450416](https://www.skills.google/public_profiles/926f5c7e-f8d2-45cc-a051-169c10a31d9d/badges/450416)