

# PRAMIKA GARG

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## EDUCATION

### Vellore Institute of Technology

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

Sep 2020 – Jul 2024

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

Software Engineer I

Aug 2025 – Present

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

Associate Software Engineer

Jul 2024 – July 2025

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

Software Development Engineer Intern

Jan 2024 – Jun 2024

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

Software Development Intern - Flights

May 2023 – Jul 2023

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)

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

May 2022 – Jul 2022

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

DESI S Ascend Educare Fellow

Oct 2021 – May 2022

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 **FinEfy**, 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

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<b>NOTE:</b> All publications are <i>double-blind peer-reviewed</i> .	
<b>IEEE: 4<sup>th</sup> ICUIS, 2024</b>   iOS, ARKit, VisionOS   <b>Cited by 1</b> ⚡	Dec 2024
<i>Inventory Management in Augmented Reality Using Apple ARKit for VisionOS</i>	
<b>IEEE: GCCIT, 2024</b>   Blockchain, NFTs, Smart Contracts ⚡	Oct 2024
<i>Leveraging BBTS and NFTs for Ethical Ticketing in Live Events</i>	
<b>IEEE: 7<sup>th</sup> CSI-TSS, 2023</b>   Python, MNE, Signal Processing   <b>Cited by 6</b> ⚡	Nov 2023
<i>Harnessing Creative Methods for EEG Feature Extraction and Modeling in Neurological Disorder Diagnoses</i>	
<b>IEEE: 7<sup>th</sup> CSI-TSS, 2023</b>   1 <sup>st</sup> Author   Python, OpenCV, Dark Channel Prior   <b>Cited by 1</b> ⚡	Nov 2023
<i>Enhancing Visibility: Multiresolution Dark Channel Prior for Dehazing and Fog Removal in Images</i>	
<b>IEEE: 4<sup>th</sup> ICRTCST, 2021</b>   1 <sup>st</sup> Author   Python, ML Models   <b>Cited by 1</b> ⚡	Feb 2022
<i>An Exhaustive Comparative Analytical Study of 15 Machine Learning Models For Automated Cardiovascular Disease...</i>	
<b>Springer: ICICIT, 2021</b>   1 <sup>st</sup> Author   Python, Algorithms, Parallel Computing   <b>Cited by 2</b> ⚡	Jan 2022
<i>Randomised analysis of backtracking-based search algorithms in elucidating sudoku puzzles using a dual...</i>	

## HONORS & AWARDS

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<b>Qualcomm</b>   Orion Award	Aug 2025
Awarded for exceptional impact leading to early promotion.	
<b>EPFL</b>   Summer Research Scholarship ⚡	May 2022
Awarded 3,600 CHF funding; Selected Top 2% of global applicants.	
<b>Google</b>   Generation Scholarship (APAC) ⚡	Apr 2022
Awarded \$1,000 USD; Selected Top 180 / 20,000+ applicants ( <b>Selectivity: 0.9%</b> ).	
<b>Harvard University</b>   WECode Scholarship ⚡	Mar 2022
Selected Top 250 / 5,000+ applicants ( <b>Selectivity: 5%</b> ).	
<b>Vellore Institute of Technology</b>   Merit Scholarship ⚡	2020 – 2022
Ranked Top 10 / 2,100+ students for 2 consecutive years.	
<b>The D. E. Shaw Group</b>   DESIS Ascend Educare Scholarship	Oct 2021
Awarded INR 50,000 stipend.	
<b>American Express</b>   AI/ML Hackathon	Oct 2021
Ranked 6 <sup>th</sup> / 1,385 participants (Individual Track).	
<b>SUSE (CNCF)</b>   Cloud Native Scholarship ⚡	Jun 2021
Selected Top 325 / 15,000+ applicants ( <b>Selectivity: 2%</b> ).	

## PROJECTS

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<b>Digital Portfolio</b>   HTML, CSS, JavaScript ⚡	Jun 2025 - Nov 2025
• Designed and developed a <b>responsive portfolio</b> with custom animations, starfield background, and <b>smooth scroll transitions</b> .	
• Built with <b>vanilla HTML/CSS/JS</b> without any frameworks, fully accessible with <b>semantic markup</b> and ARIA labels.	
<b>Parsify</b>   Python 3, POSIX, Shell ⚡	Jan 2025 - Sep 2025
• A logical parser of the <b>POSIX standard</b> (IEEE Std 1003.1-2017) subset - Shell Token Recognition rules.	
• Implements Section 2.3 of the <b>Shell Command Language</b> chapter, covering the unified <b>POSIX.1 Shell and Utilities</b> interface.	

## SKILLS

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<b>Languages:</b> Java, Python, Swift, JavaScript, SQL, L <sup>A</sup> T <sub>E</sub> X
<b>Cloud &amp; DevOps:</b> AWS, GCP, Kubernetes, Docker, EKS, Terraform, CI/CD, Linux, Splunk, Grafana, Git
<b>Backend &amp; Databases:</b> SpringBoot, FastAPI, Node.js, RabbitMQ, Kafka, MySQL, PostgreSQL
<b>AI/ML:</b> TensorFlow, OpenCV, Federated ML, LLMs, Jupyter, Tableau, Data Analytics
<b>Mobile &amp; Testing:</b> iOS SwiftUI, XCode, Maestro, Playwright, Nightwatch.js, UI Automation, Test Automation
<b>Leadership &amp; Soft Skills:</b> Technical Leadership, Mentorship, Cross-functional Collaboration, Agile/Scrum, Strategic Planning

## CERTIFICATIONS

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<b>JP Morgan Chase</b>   Software Engineering Virtual Experience ⚡	Sep 2021
<b>Postman</b>   Student Expert ⚡	Aug 2021
<b>Goldman Sachs</b>   Engineering Virtual Program ⚡	Jul 2021
<b>Coursera</b>   Fine Tune BERT for Text Classification with TensorFlow ⚡	Jun 2021
<b>Google</b>   Build and Secure Networks in Google Cloud ⚡	Nov 2020
<b>Google</b>   Deploy to Kubernetes in Google Cloud ⚡	Nov 2020
<b>Google</b>   Insights from Data with BigQuery ⚡	Nov 2020
<b>Google</b>   Perform Foundational Data, ML, and AI Tasks ⚡	Nov 2020
<b>Google</b>   Integrate with Machine Learning APIs ⚡	Nov 2020
<b>Google</b>   Engineer Data in Google Cloud ⚡	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=t0oW2mYAAAAJ>

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

### Education

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

**Postman:**

[https://badges.parchment.com/public/assertions/lFzfhwJRSxul64gbQmWeIg?identity\\_\\_email=micepram%40gmail.com](https://badges.parchment.com/public/assertions/lFzfhwJRSxul64gbQmWeIg?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)