

# Mahesh Kumar

Portfolio: [krmahi.github.io/portfolio-bento-ui](https://krmahi.github.io/portfolio-bento-ui)

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Online Presence: [GitHub](#) [Figma](#) [Unstoppable \(Hackathons\)](#)

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## SUMMARY

**Aspiring Software Developer** with strong foundation in problem solving, full-stack development and cloud computing. Interned at **AWS** (Cloud Data) and **Trusted Wearables** (Minimal resource UIs), Proven performer in national-level tech competitions including **Flipkart GRiD 5.0**, **HackOn with Amazon**, **Tata Imagination Challenge** and **Xiaomi Ode2Code 3.0** (Top 20 Finalist)

## WORK HISTORY

### Trusted Wearables – Software Developer Intern

Delhi Ncr, India

Feb 2024 – Apr 2024

- Developed **cross-platform** applications with **React Native**, improving **runtime performance** and **platform-level compatibility** on smart devices
- Designed embedded UIs using **LVGL** on resource-constrained hardware, **reducing frame drops** & improving **rendering efficiency by 25%**
- Identified and resolved rendering bottlenecks, applying root-cause analysis and proactive bug-fixing to **improve load time efficiency on low-resources**

### AWS – Cloud Trainee

Remote

Sep 2023 – Nov 2023

- Automated **AWS, EC2, s3 resource management** & scripting using **CLI (Linux-shell)** and lifecycle policies, **reducing monthly cloud storage cost by 18%**
- Analyzed large datasets using **Redshift** & **Looker**, automating reporting pipelines using **SQL queries** & **reducing manual analysis time by 40%**
- Executed **Automated integration** and **regression tests** for cloud-deployed applications, identifying configuration-level issues

## PROJECTS

### AI Drawing Calculator and Problem Solver | [Repo](#), [Live](#)

- Developed a React-based canvas app to recognize **hand-drawn math problems** via LLM-powered API integration with **base64-encoded snapshots**
- Developed a canvas-based UI with swatches and live rendering, **improving task completion time by 35% over traditional form input methods**
- Added **undo/redo functionality** and **pressure-sensitive**, increasing drawing precision and **reducing user correction time**

**Skills:** React.js, Python, TypeScript, API, TailwindCSS, MathJax, Axios, Uvicorn

### Autonomous Vehicle Navigation System (SenseDrive) | [Repo](#)

- Built and tested simulation frameworks for **lidar**, **camera**, **INS**, **Sensor Fusion** integrating **C++** modules in **Unreal Engine** to replicate real-time sensor inputs and signal processing patterns
- Developed traffic interaction logic using **Simulink**, **Stateflow**, Decision systems & verifying time sensitive transitions under urban drive test scenarios
- Contributed to research-grade simulation environment replicating realistic autonomous driving patterns for **academic** and **R&D applications**

**Skills:** Simulink, Stateflow, Unreal Engine, MATLAB, C++, Robotics

### SecondLife – Cross-Platform Marketplace App | [Repo](#)

- Developed a mobile app for buying/selling second-hand items, integrating secure auth, image caching, push notifications, and real-time form validation
- Achieved <2s average load time** and seamless user flows across 10+ tested Android/iOS devices, **improving usability by 35%**
- Built custom backend APIs in Node.js for item listing, JWT authentication, and secure user data handling

**Skills:** React Native, Expo, Node.js, JWT, SecureStorage, AsyncCache

## SKILLS

### • Languages & Tools:

Python, C++, JavaScript, TypeScript, HTML, MATLAB, GitHub, version control, CI/CD, Postman, Figma, Firebase, Bash, OOPs

### • Frameworks, Platforms & Libraries:

React.js, React Native, Node.js, Expo, Docker, Express.js, Redux, AWS, FastAPI, Linux, GenAI, Google Cloud, BigQuery, REST APIs, JWT Auth, PyTorch, TailwindCSS, Debugging, SDLC

### • AI, Data & System Technologies:

Machine Learning, NLP, CNN, MongoDB, MySQL, OpenCV, UI/UX, Canvas API, State Management (Redux/hooks/Props), LLMs

### • Soft Skills:

Leadership, Problem Solving, Collaboration, Communication, Time Management, Critical Thinking, Adaptability, Analytical Reasoning

## EDUCATION

### Bachelor's Computer science & engineering

G.L. Bajaj Institute of Technology and Management, Delhi NCR

Nov 2020 – Jul 2024 | CGPA: **8.23 / 10**

### Intermediate & High School - Science (PCM)

Army Public School, India

Apr 2019 – Mar 2020 **XII** | Grade: **89%**

Apr 2017 – Mar 2018 **X** | Grade: **86.83%**

## CERTIFICATIONS

- Cloud Architecture & Fundamentals – AWS Academy
- Google Cloud Arcade Facilitator – Google Cloud
- Data Structures & Algorithms in Python – Google
- Problem Solving – HackerRank
- Data Science Foundation – Infosys
- Certified C++ Developer – Coding Ninjas

## HACKATHONS

- Top 20 Finalist**, Xiaomi Ode2Code 3.0
- Advanced to Level 2**, Flipkart GRiD 5.0 (Software Dev Track)
- Participated in **HackOn with Amazon**, **TVS Credit E.P.I.C 5.0 – IT Challenge**
- Other national-level challenges: Tata Crucible Quiz, Tata Imagination Challenge, Tally CodeBrewers, L'Oréal Sustainability Challenge, Namma Yatri Mobility Challenge