KARTIK MARATHE

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SUMMARY

Master of Science in Computer Science candidate at ASU with over two years of full stack software engineering experience, delivering scalable REST APIs, data pipelines, and cloud native web applications.

EDUCATION

ARIZONA STATE UNIVERSITY Tempe, AZ **Aug 2024 - May 2026**

Master of Science, Computer Science (GPA: 4.22/4.0)

- **Coursework:** Data Mining, Cloud Computing, Mobile Computing, Data Visualization

R.V. COLLEGE OF ENGINEERING Bengaluru, India **Aug 2018 - Jul 2022**

Bachelor of Engineering, Electronics and Communication (GPA: 3.47/4.0)

- **Coursework:** Database Management Systems, Intelligent Systems, Data Structures and Algorithm, Web Programming

PROFESSIONAL EXPERIENCE

The Boeing Company | *Associate Software Engineer* **Aug 2022 - Jul 2024**

- Designed and shipped **50+ RESTful APIs** using Spring Boot, achieving **99%-unit test** coverage through JUnit 5 and Mockito, while implementing multi-layer testing strategy across controller, service, and repository layers.
- Orchestrated GitLab CI/CD for Java and Angular applications by adding staged builds, running tests, and environment-specific deployments, cutting release time from **90 minutes to 10 minutes** and reducing manual errors.
- Architected a Solr 8 search stack for **10k+ PDF** documents: parsed PDFs to JSON, ingested via REST APIs, enabled fuzzy and phrase search with faceting, tuned schema and ranking, unified with an Angular 14 UI for rapid querying.
- Expanded content management system (CMS) functionality by creating **10 APIs**, boosting user access **efficiency by 50%**
- Migrated a legacy Java desktop app to a Spring Boot web platform, cutting server and maintenance costs by **USD 72,000 per year** through streamlined infrastructure and automated deployments.

Ikshana (Indian Institute of Science) | *Research Intern* **Jan 2022 – Jul 2022**

- Developed Python ETL scripts with Pandas to clean and merge **10+ clinical** and sensor data streams, enabling deep analysis of urinary incontinence symptom patterns and powering scikit-learn models for summary reports.
- Created an Android app in Android Studio using Java, implementing Android BLE APIs for remote device control, which enhanced user interaction and device management capabilities

Team Chimera (R V College of Engineering) | *Data Acquisition Engineer* **Jul 2019 - May 2022**

- Implemented an LTE-based data acquisition system for real-time transmission, delivering 8+ data points like voltage, SoC, and thermal data, and integrated a responsive UI with 5+ APIs, enhancing data flow and user interaction
- Refined temperature sensor placement for accurate data reads, validated on dyno-bench and on-track runs to stabilize telemetry.

PROJECTS

Wealth Wizard | https://ai-finance-tracker-seven.vercel.app/

- Engineered a comprehensive finance platform using Next.js, PostgreSQL, Inngest, and Arcjet, featuring multi-account support, recurring transactions, real-time expense tracking, budget alerts, and interactive reporting dashboards.
- Enabled users to set budgets and send notification when approaching their limits, along with monthly spending insights.
- Structured financial dashboards with interactive visualizations for expense tracking and account statistics.

Spotify with Chat | https://spotify-clone-gi9v.onrender.com/

- Launched an advanced Spotify-inspired web application leveraging the MERN stack, incorporating comprehensive admin capabilities to manage a library of **100+ songs** and **20+ albums** efficiently.
- Incorporated real-time chat functionality and user status tracking using Socket.io, enhancing interactive communication.
- Deployed on AWS EC2 behind an Application Load Balancer with Auto Scaling Groups, and stored song assets in AWS S3.

Energy Visualization

- Collaborated in a 4-member team to develop a full-stack web application using Spring Boot, React, and D3.js, visualizing energy import/export and renewable energy generation data for **200+ countries** with a 3D globe rendered via Three.js.
- Implemented scroll-synced storytelling that animates **60+ years** of data in linked line charts for temporal trend exploration.
- Built an animated country-centric network graph, where nodes are renewable capacity and links are import-export flows.

TECHNICAL SKILLS

- **Language:** Java, Python, C++, JavaScript, SQL, Bash, TypeScript, Go
- **Cloud & Databases:** AWS, Azure Cloud, Docker, Kubernetes, PostgreSQL, MySQL, MongoDB
- **Development:** Spring Boot, React.js, Node.js, Next.js, Angular, HTML, CSS, REST API, GraphQL, JUnit, Mockito, Tailwind CSS
- **Tools:** Spark, Kafka, Redis, Jenkins, GitLab CI/CD, Git, GitHub, Jira, Postman, Agile, Trello

ACHIVEMENTS

- Winner of Innovation Hacks 2025, ASU's largest student-led spring hackathon, for developing an application that empowers job seekers to customize their resumes and generates compatibility scores for further analysis.
- Secured 3rd place at the Intel Corporation Hackathon hosted by Arizona State University through enhancing the Intel Retail Al Suite with innovative data visualization capabilities that improved analytical insights.
- Presented research on the "VLSI Floorplan Optimization Tool" at the prestigious INDICON conference, showcasing cutting-edge methodologies in VLSI design and driving progress in the field.