KARTIK MARATHE

kmarathe@asu.edu| 480.913.3134 | linkedin.com/in/kartik-marathe | github.com/ksm007 | Portfolio

EDUCATION

ARIZONA STATE UNIVERSITY Tempe, AZ

Master of Science in Computer Science: **GPA: 4.0/4.0** August 2024 – May 2026

Relevant Courses: Data Mining, Cloud Computing, Mobile Computing, Data Visualization

R.V. COLLEGE OF ENGINEERING

Bachelor of Engineering in Electronics and Communication: **GPA: 3.47/4.0** August 2018 – July 2022

Relevant Courses: Database Management Systems, Intelligent Systems, Data Structures and Algorithm, Web Programming

TECHNICAL SKILLS

- **Language**: Java, Python, C++, JavaScript, SQL, Bash, TypeScript, Go
- **Cloud & Database**s: 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
- **AI/ML**: NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Keras, Large Language Models

PROFESSIONAL EXPERIENCE

THE BOEING COMPANY

Associate Software Engineer August 2022 – July 2024

- Architected and delivered **100+ 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.
- Streamlined **CI/CD deployment** workflows using GitLab for both Java and Angular projects, halving deployment times and significantly reducing manual errors by **40%**, thus enhancing operational efficiency.
- Implemented **search capabilities** for extensive datasets (exceeding **1 million records**) by integrating **indexing server**, resulting in a **70% reduction** in query latency and a **95% enhancement** in search accuracy.
- Expanded the content management system (CMS) functionality by introducing over **10+ APIs**, boosting user access efficiency by **20%** and enriching the overall user experience.

IKSHANA (INDIAN INSTITUTE OF SCIENCE)

Research Intern January 2022 – July 2022

- Undertook comprehensive research on **10+ critical parameters** affecting the causes and treatments of urinary incontinence, utilizing advanced technologies to propose optimized solutions.
- Integrated a mobile interface for remote device control, amplifying **functionality by 40%** and significantly enhancing the user experience.
- Created and prototyped a **cost-effective incontinence management device**, achieving a **20% reduction** in **production costs** through innovative design enhancements and strategic material optimization.

TEAM CHIMERA (R V COLLEGE OF ENGINEERING)

Data Acquisition Engineer October 2018 – May 2022

- Implemented an LTE-based data acquisition system for **real-time transmission**, delivering **8+ data points** and a responsive UI integrated with **15+ APIs**, ensuring efficient data flow and user interaction.
- Enhanced the Battery Management System (BMS) by monitoring **3+ key parameters** and seamlessly integrating hardware and software.
- Refined sensor placements for precise data acquisition, resulting in a **40% increase** in system reliability by optimizing accuracy and minimizing data inconsistencies through strategic planning and execution.

PROJECTS

WEALTH WIZARD | Link October 2024 – December 2024

- Engineered a comprehensive finance platform using Next.js, Supabase, Inngest, and Arcjet, featuring multi-account support, automated 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 dynamic financial dashboards with interactive visualizations for expense tracking and account statistics.

SPOTIFY CLONE WITH CHAT | Link January 2024 – June 2024

- Built 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 user engagement and interactive communication.
- Enabled seamless handling of **30+** concurrent users with secure data storage and encryption, ensuring robust data protection and privacy.

VISUALIZATION OF ENERGY IMPORT VS. RENEWABLE ENERGY PRODUCTION August 2024 – December 2024

- Created an interactive full-stack solution with Spring Boot, React, and D3.js, offering comprehensive visualizations of energy imports, exports, and renewable generation across 200+ countries, utilizing Three.js for interactive globe rendering and stream graphs.
- Developed a scrollable interface syncing annual global energy data, seamlessly transitioning via a linked line chart.
- Designed a radar chart of energy metrics for 150+ countries, clarifying insights and boosting decisions by 30%.

ACHIVEMENTS AND AWARDS

- 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 by analyzing the alignment between applicants' skills and job requirements.
- Secured 3rd place at the Intel Corporation Hackathon hosted by Arizona State University through enhancing the Intel Retail AI 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.