

KARTIK MARATHE

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EDUCATION

ARIZONA STATE UNIVERSITY

Master of Science in Computer Science : **GPA: 4.0/4.0**

- Relevant courses: Data Visualization, Mobile Computing, Cloud Computing, Data Mining

Tempe, AZ

Aug 2024 - May 2026

R.V COLLEGE OF ENGINEERING

Bachelor of Engineering in Electronics and Communication: **GPA: 8.67/10**

- Relevant courses: Data Structures and Algorithms, Database Management System, Operating System

Bengaluru, India

Aug 2018 - Jul 2022

TECHNICAL SKILLS

- Language:** Java, Python, C++, JavaScript, SQL, Bash, TypeScript
- Cloud & Databases:** AWS (IAM, EC2, DynamoDB, API Gateway, Lambda, S3, SQS), Azure Cloud, Docker, Kubernetes, PostgreSQL, MySQL, NoSQL, MongoDB
- Development:** Spring Boot, Django, React.js, Node.js, Angular.js, jQuery, HTML, CSS, Kafka, Hibernate, REST API, JUnit, Mockito
- Tools:** Hadoop, Spark, Kafka, Neo4j, Redis, Scala, Jenkins, GitLab CI/CD, Git, GitHub, Jira, Confluence, Postman, Agile, Automation
- AI/ML:** NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Keras, CNNs, RNNs, Transformers, GANs, Large Language Models, Multi-Modal AI, Computer Vision

PROFESSIONAL EXPERIENCE

BOEING

Associate Software Engineer

Aug 2022 – Jul 2024

- Delivered **100+** RESTful APIs using Spring Boot, achieving **95%** unit test coverage through rigorous JUnit and Mockito testing.
- Automated CI/CD deployment workflows via GitLab for Java and Angular projects, cutting deployment time by **50%** and reducing manual errors by **40%**.
- Optimized search functionality for large datasets (over **10 million** records) by integrating Apache Solr, reducing query latency by **70%** and improving accuracy to **95%**.
- Enhanced database query performance by **25%**, improving response times for data-heavy applications by enabling faster data retrieval.
- Expanded content management system (CMS) capabilities with **5+** new APIs, increasing user access efficiency by **20%**.

IKSHANA (INDIAN INSTITUTE OF SCIENCE)

Research Intern

Jan 2022 – Jul 2022

- Conducted research on **10+ parameters** influencing causes and treatments for urinary incontinence, leveraging existing technology to propose efficient solutions.
- Added a mobile interface for remote device control, enhancing functionality by **40%** and improving user experience.
- Designed and prototyped a cost-effective incontinence management device, reducing production costs by **20%** through innovative design improvements.

TEAM CHIMERA (R V COLLEGE OF ENGINEERING)

Data Acquisition Engineer

Oct 2018 – May 2022

- Implemented an LTE-based data acquisition system for real-time transmission, providing **5+** data points and a responsive UI with **5+** APIs.
- Enhanced the Battery Management System by monitoring **3+** key parameters and integrating hardware and software, improving performance by **20%**.
- Collaborated closely with the electronics team** to optimize sensor placements, ensuring accurate data acquisition and improving overall system reliability.
- Expanded the system's scalability** to accommodate future upgrades, enhancing its adaptability to new technological advancements and team needs.

PROJECTS

VLSI FLOORPLAN OPTIMIZATION TOOL

Dr. Shilpa D R

Java, Swing API, Simulated Annealing

- Contributed to a desktop application for optimizing VLSI layouts with simulated annealing, increasing layout efficiency by **40%**.
- Created a graphical user interface with Swing APIs, incorporating real-time animations and visual metrics to enhance user interaction and insight gathering.
- Presented the research and findings at the prestigious **INDICON conference**, showcasing innovation in VLSI design methodologies.

REAL-TIME DETECTION OF COVID-19 PROTOCOLS VIOLATION

Dr. Roopa J

Python, YOLO v3, Resnet 50

- Constructed a mask detection and proximity analysis solution, achieving a **93%** success rate in real-time identification.
- Implemented robust algorithms for video stream analysis, ensuring **accurate physical distancing measurements** in varying environments.
- Streamlined performance by integrating deep learning models with real-time processing pipelines, ensuring **seamless detection and monitoring** in diverse settings.

SPOTIFY CLONE WITH CHAT [Personal]

React, Node.js, Socket.io, Clerk, Cloundinary, MongoDB, Express

- Developed a cutting-edge Spotify-inspired web application utilizing the MERN stack with comprehensive admin features to efficiently manage a vast library of **100+** songs and **20+** albums.
- Integrated real-time chat functionality and user status visibility utilizing **Socket.io**.
- Supported a high volume of **30+** simultaneous users with end-to-end encryption and secure message storage.