

# KOUSHIK KASHETTY

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## SUMMARY

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Software Engineer with 4+ years of experience building solutions in Java and JavaScript. Skilled in enhancing and maintaining software, implementing bug fixes and designing new features. Proficient in working with functional teams to deliver customer focused solutions and capable of quickly adapting to R&D.

## WORK EXPERIENCE

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### Aetna-CVS

Software Engineer

June 2024 - July 2025

Project: Care Paths AI Platform

- **ML Framework Implementation:** Developed personalized health recommendation models with PyTorch and TensorFlow, tailoring care paths for members and improving engagement rates by 25% on GCP.
- **AI-Driven Analytics:** Created predictive algorithms in Python to automate claims processing, integrating RAG models for better data retrieval and reducing nurse workload by 90 minutes daily.
- **Cloud Infrastructure Management:** Managed AI workloads on Google Cloud Platform, using vector databases for efficient querying and ensuring secure handling of PHI data.
- **Backend Service Enhancement:** Built microservices with FastAPI and Java, supporting real-time integrations that streamlined app experiences for chronic condition management.
- **Model Training and Deployment:** Trained large language models for member chat interfaces, leveraging Gemini AI and Python scripts to achieve higher accuracy in personalized wellness programs.
- **System Integration:** Incorporated asynchronous messaging in C# and Go, connecting AI tools with existing databases like BigQuery, which accelerated development cycles and improved operational automation.

### Verizon

Software Engineer

Aug 2023 - May 2024

Project: Fiber Cut Prevention AI System

- **AI Model Development:** Built machine learning models using Python and PyTorch to analyze over 10 million dig requests, reducing fiber cuts by 15% through predictive analytics on AWS infrastructure.
- **Generative AI Integration:** Implemented Llama models on cloud for processing natural language in excavation permits, improving accuracy in risk assessments and integrating with existing ML pipelines.
- **Cloud Deployment:** Deployed scalable AI solutions on AWS and Azure, handling high-volume data processing with Kubernetes for containerization and real-time monitoring.
- **Data Pipeline Optimization:** Designed ETL processes in Java and Python, incorporating Kafka for streaming data, which enhanced system efficiency and cut processing time by 20%.
- **Cross-Team Collaboration:** Worked with data scientists to refine deep learning algorithms in TensorFlow, ensuring compliance with telecom regulations and boosting model performance metrics.
- **Performance Tuning:** Optimized ML models for edge computing, using Rust and Go for low-latency components, resulting in faster response times during peak network loads.

### OwlSpark

Backend Engineer

May 2022 - Aug 2022

- **Candidate Assessment Module:** Delivered a candidate assessment module, integrating voice and video analysis with React.js, Django, Generative AI and openCV, achieving a candidate satisfaction rating of 4.5 out of 5.
- **Golang Microservices:** Developed Golang microservices to assess candidate profiles and match them to job openings, leveraging Docker and Kubernetes for deployment, resulting in a 60% improvement in processing speed and accuracy.
- **Messaging Architecture:** Engineered lightweight messaging architecture with Django Channels, Web Sockets, Redis with low latency.

- **Monitoring and Analytics:** Monitored pod and container statistics by implementing Prometheus and Grafana to collect analytics and identify issues, leading to a 20% cost savings in resource utilization.

## WarrantyMe

Software Engineer

Aug 2019 - June 2021

- **UI Development:** Designed and developed reusable React.js components using Hooks and Context API, creating a modular UI architecture.
- **Dashboards:** Built real-time analytics dashboards with React.js and D3.js, enhancing system performance visibility and user engagement. Implemented secure OAuth 2.0 and JWT-based authentication across the frontend, protecting access to dashboards and APIs for 400+ users.
- **API Integration:** Developed RESTful APIs using Flask and PostgreSQL to support real-time data operations for user and admin features. Integrated third-party APIs to extend platform functionality, resulting in improved customer experience and retention.
- **Infrastructure Automation:** Deployed applications on AWS EC2 and automated infrastructure provisioning using Terraform, reducing environment setup time by 50%.
- **Monitoring:** Monitoring with ELK Stack and AWS CloudWatch, enabling proactive issue detection through real-time log analysis and alerts.

## PROJECTS

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### Project Joystick - AtSign

- Implemented an IoT device using ESP32. Data transmission to a Java application using the AtSign protocol, enabling real-time data analysis.

### Biomedical Signal and Image Processing - University of Massachusetts, Boston

- Processed multi-modal biomedical datasets (EEG, fMRI, X-ray, PET) and corrected imaging artifacts across 6 modalities, enabling accurate cross-modality feature alignment and improving diagnostic model accuracy by 18% in evaluation benchmarks.

### ChatBot Engine -McDonald's Company

- Used Python, Rasa, and Flask. Employed NLP techniques to enhance user interaction. Used version control with Git.

### Crime Prediction Using Machine Learning - SNIST

- Developed a supervised learning model using TensorFlow, predicted with 90% accuracy. Used Matplotlib to create data visualization.

## EDUCATION

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### University of Massachusetts, Boston

Master of Science, Computer Science - GPA: 3.7/4.0

Aug 2021 - May 2023

### Sreenidhi Institute of Science and Technology

Bachelor of Engineering, Computer Science - GPA: 3.7/4.0

Aug 2016 - June 2020

## SKILLS

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**Languages & Web Technologies:** Java, JavaScript, Python, Golang, C#, Rust, SQL, React.js, Flask, Django, FastAPI

**Frameworks & Methodologies:** Microservices, REST, OAuth2, JWT, WebSockets, Django Channels, Hooks/Context API (React)

**Tools & Platforms:** Git, Docker, Kubernetes, Prometheus, Grafana, Terraform, Redis, Kibana, ESP32, ELK Stack, Kafka

**Cloud & DevOps Technologies:** AWS (EC2, CloudWatch), Google Cloud Platform (BigQuery), Azure

**Databases:** PostgreSQL, BigQuery

**Machine Learning & Data Science:** TensorFlow, PyTorch, Generative AI (Gemini, Llama, RAG), OpenCV, Rasa, NLP Techniques, Supervised Learning, Matplotlib