Karthik Gowda Ramakrishna

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SUMMARY

Professional with over 3 years of experience in Data Science and Software Engineering, demonstrating success in crafting high-performance, reliable, and maintainable code. Passionate about enhancing products and processes through generative AI and Data-driven solutions. Proficient in machine learning, full-stack development, and cloud technologies. Actively seeking a dynamic role to leverage deep technical expertise and drive innovative scalable solutions.

EDUCATION

Northeastern University, Boston, MA   **Expected May 2025**

Master of Science in Information Systems

Coursework: Data Science Engr. Methods & Tools(Python, Statistics, ML Algorithms), Advanced Data Science /Architecture(C++, Neural Networks, Big Data), Web Design Engr. (JavaScript, React, AWS), Application Engr.& Development(Java, OOPS, DSA)

Reva University of Technology, Bangalore, KA   **June 2016 - May 2020**

Bachelor of Technology in Engineering

PROFESSIONAL EXPERIENCE

SENIOR ANALYST/SOFTWARE ENGINEER - *Capgemini Information Technology*   **July 2021 – August 2023**

- Developed core services within a Microservice Architecture using NodeJS, Spring Boot and Flask which accounted for 80% of the overall system functionality, enhancing system scalability and reducing deployment time by 30%
- Accelerated SDK development for machine learning & deep learning using quantitative modeling, PyTorch, and TensorFlow, reducing deployment time by 30% and boosting model accuracy by 20% with strategic algorithm optimization
- Deployed ML models on AWS EC2, enhancing accessibility across 15+ departments and optimizing operational efficiency
- Leveraged PyTorch to refine e-commerce recommender systems, boosting product recommendation relevance by 20%
- Utilized NLP & Naïve Bayes to achieve 85% accuracy in ticket categorization, cutting SLA response times in half & saving $600K annually
- Led collaborative cross-functional team comprising Research engineers, ML engineers, Software developers, QA testers, and Designers, resulting in exchange of technical expertise and 75% reduction in revisions

SYSTEMS ENGINEER - *MIDTEK*   **July 2020 - July 2021**

- Implemented distributed computing techniques with Node.js and MongoDB, improving data processing efficiency
- Migrated client applications to AWS cloud, reducing infrastructure costs by 10% while improving scalability by 12%
- Utilized Selenium and JUnit for automated testing frameworks to ensure robust functionality and error-free deployments.
- Developed Tableau & Power BI dashboards to visualize key performance metrics, facilitating proactive system optimizations

PROJECTS

Finance Dashboard: (*Machine Learning, MERN, typescript, MUI*)

- A full-stack finance website with ML-driven financial trend forecasting, achieving a 30% boost in accuracy. Features include advanced dashboarding and data visualization, utilizing MERN stack, TypeScript, and MUI, Enhancing Investment Decisions

LLM chatbot: (*Langchain, OpenAI API, Streamlit, Natural Language Processing*)

- Architected and developed a news research tool using OpenAI API, Streamlit, and Langchain, incorporating vector embeddings to enhance data analysis and decision-making for equity research analysts, aligning with AI-driven educational tools

Drowsiness Detection System: (*Python, Pytorch, OpenCV, Yolov5*)

- Implemented PyTorch network into a computer vision model, optimized 4 hidden layers to get best results, featuring an 85% accurate facial detection model and a CNN with 82% drowsiness detection accuracy

GPT-2: (*Python,* Numpy*, Pandas, Attention Is All You Need paper*)

- Engineered a decoder-only Transformer model based on the seminal 'Attention is All You Need' architecture, advancing the capabilities of neural networks in processing complex language patterns, with potential applications in educational content generation.

Tokyo Olympics Data-Pipeline & Data Engineering: (*Data Analysis & Engineering, Azure data factory, Databricks SQL, Power-BI*)

- Architected and implemented a comprehensive data pipeline resulting in a 30% increase in processing efficiency, for Sports Analytics

TECHNICAL SKILLS

Programming Languages & Databases: Python, R, Java, C++, JavaScript, TypeScript, HTML, CSS, Mysql, Postgres, MongoDB

Frontend/Backend Frameworks: Angular JS, React JS, Redux, Vue JS, NodeJS, Spring Boot,

AI and Machine Learning Tools: TensorFlow, PyTorch, Anaconda, Jupyter, Colab

DevOps: Jenkins, Kubernetes, Ansible, Terraform, AWS Cloud (Amazon Web Services), Nginx, Spark

Knowledge Areas: Generative AI, ML, CV, NLP, Deep Learning, LLM, Computer Science, Guardrails, RAG, Prompt Engineering