Aman Dhakad

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EDUCATION

Master of Science, Information Technology and Management **Jan 2023 - Dec 2024**
Illinois Institute of Technology, GPA 3.8/4 Chicago, IL

Bachelor of Technology, Computer Science and Engineering **May 2018 - Jun 2022**
Rajiv Gandhi Proudyogiki Vishwavidyalaya Indore, India

PROFESSIONAL EXPERIENCE

HieCOR Software Technologies **Jan 2022 - Nov 2022**
Software Engineer Remote

- Developed and maintained backend microservices using Java (Spring Boot), handling user data, metrics, and core platform features for thousands of users, by designing modular services, implementing clean code, and integrating unit and integration tests.
- Built and optimized REST APIs for mobile and web applications, reducing response time by 20% and improving reliability, by analyzing endpoints, validating requests/responses, and implementing caching and proper error handling.
- Implemented real-time data pipelines using Kafka to process high-volume health and activity events, ensuring fault-tolerant ingestion and low-latency processing, by setting up topic partitioning, consumer groups, and robust error-handling mechanisms.
- Designed PostgreSQL schemas and optimized queries to support analytics and reporting, improving database performance by 25%, by analyzing access patterns, creating indexes, and tuning complex joins.
- Deployed and managed services on AWS (ECS, RDS, Lambda, S3) with CI/CD pipelines (GitHub Actions, Docker), reducing deployment errors and downtime by 30%, by automating builds, tests, and monitoring, and using Terraform for infrastructure-as-code.

Pep Coding Education **Jul 2021 - Dec 2021**
Software Engineering intern Remote

- Improved user experience and interface responsiveness by developing and maintaining web application features using JavaScript and React, resulting in more engaging and efficient user interactions.
- Enhanced software quality and personal technical skills by collaborating with senior engineers to fix bugs and implement enhancements, leading to hands-on experience with agile development cycles and more robust code through regular code reviews.
- Strengthened teamwork and project delivery by actively participating in daily standups and sprint planning, resulting in a deeper understanding of the software development lifecycle and effective collaboration in a remote environment.
- Increased backend efficiency by writing and optimizing SQL queries to support data operations, resulting in faster and more reliable data retrieval for application features.
- Improved software reliability and reduced manual testing effort by assisting in the creation of automated test scripts, resulting in faster release cycles and higher confidence in product quality.

PROJECTS

ASL Prediction using Vanilla CNN 5 Layered Architecture | Python, TensorFlow, Pandas, NumPy, Flask | Link

- Enhanced accessibility and communication for the deaf and hard-of-hearing community by deploying a CNN model using Flask for American Sign Language prediction, resulting in a functional system with 85% accuracy that effectively translates hand gestures in real-time.

Assistive Vision | Python, BLIP (image captioning), OpenCV (video capture), pyttsx3 (text-to-speech), Webcam| Link

- Improved environmental awareness and accessibility for visually impaired users by developing "Assistive Vision," a real-time application that provides object descriptions and auditory feedback via webcam, resulting in enhanced user independence and situational understanding.
- Leveraged BLIP for image captioning, OpenCV for live video capture, and pyttsx3 for text-to-speech conversion, creating an integrated solution that delivers immediate, spoken descriptions of the user's surroundings.

Sentiment Analysis for U.S. Election Prediction | Python, Pandas, NumPy, NLTK, scikit-learn, NLP

- Achieved 75% accuracy in classifying voter sentiment and predicting election trends by conducting sentiment analysis on 100,000+ election-related tweets using NLP techniques, resulting in actionable insights for political forecasting.
- Delivered valuable insights into voter sentiment by performing data preprocessing, exploratory analysis, and sentiment classification, resulting in a deeper understanding of public opinion during the election cycle.

SKILLS

- **Programing Languages:** Java, JavaScript, SQL, Python, Java, C++
- **Framework & Libraries:** Spring Boot, Node.js, Django, Express.js, React.js, .NET, OpenCV, scikit-learn, TensorFlow
- **Database Technology:** MySQL, PostgreSQL, MongoDB, DynamoDB, Kafka, Apache Spark
- **Machine Learning:** Machine Learning Algorithm, Reinforcement, Neural Networks, AI-powered solutions, NLP
- **DevOps and Cloud:** CI/CD, Docker, Git, AWS (EC2, S3, RDS, ECS), Jira, Agile, ML flow
- **Software Development and Design:** Software Systems Design, Full Stack Development, Cross Domain Knowledge.