Akash R Chavan

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SUMMARY

Software professional with **8 years' experience** in **software design**, **development**, **testing**. Able to work collaboratively as well as independently to deliver assigned tasks on time. Quickly adapts/learns new technologies, tools, languages, and team environment.

EDUCATION

California State University, Los Angeles
Master of Science in Computer Science – GPA 4.00 | Los Angeles, California — May 2024

Deogiri Institute of Engineering and Management Studies, Aurangabad
Bachelor of Engineering in Computer Science and Engineering - GPA 3.46 | Aurangabad, India — Jul 2016

PROFESSIONAL EXPERIENCE

Aeonture — May 2023 – April 2024
Software Engineer Intern

- Designed and implemented a robust platform, including cloud **infrastructure on AWS**, and developed backend applications using **Express.js, Node.js** and **MongoDB**
- Seamlessly integrated multiple applications into a single mobile application using APIs, ensuring smooth and unified user experience.
- Deployed applications on AWS with auto-scaling capabilities to handle increasing traffic and load efficiently.
- Implemented microservices architecture and AWS Lambda functions to enhance the app's scalability, reliability and performance.
- Utilized Apache Kafka for real-time data processing, enabling efficient data streaming and integration across different system components.

FOSSEE — Feb 2019 – May 2022
Senior Software Engineer

- Developed Yaksh, an e-learning platform using **Python**, **Django**, **Django Rest Framework**, and **AWS**.
- **Improved platform performance by 98%** through query optimization and integrated Memcached to **reduce database load by 40%**.
- Created a progressive web application with Vue.js, **increasing user engagement by 40%** through enhanced interaction features such as chat and feedback systems.

IEOR IIT Bombay — June 2020 - Oct 2020
Software Engineer

- Implemented timetabling solutions using **Python**, **Java**, **Pandas**, **NumPy**, and **Bash**; **reduced scheduling errors by 50%** and **enhanced operational efficiency by 20%**.
- Created Python scripts to automate data workflows, ensuring accurate data manipulation and reporting, leading to a **50% reduction in processing time** and **enhancing team productivity by 35%**.

Virtual Labs IIT Bombay — Oct 2017 – Feb 2019
Software Engineer

- Created a remote-triggered Single Board Heating System (SBHS) virtual lab using Django, Flask, and JavaScript, **reducing manual intervention by 30%** and **increasing student engagement and lab efficiency by 35%**.
- **Improved system efficiency and reliability by 40%** by implementing a load-sharing master-slave architecture with Raspberry Pi's and a centralized database, eliminating data inconsistency.
- Developed a lightweight Flask API for Raspberry Pi's, refactored the codebase for Python 3 and PEP8 compliance, and improved the Slot Booking System, **decreasing booking errors by 30%**

Tudip Technologies — Aug 2016 – Oct 2017
Software Engineer

- Developed scalable backend services using Python, Flask, and PostgreSQL for various client projects.
- Design and implemented RESTful APIs, integrating with third-party services, and ensuring high performance and security.
- Mentored interns, conducted code reviews, and provided technical guidance on best practices.
- Coordinated with cross-functional teams to gather requirements, plan sprints, and deliver features on time.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, TypeScript, C/C++, Java, Go(golang)
Frameworks and Libraries: Node.js, Express.js, Django, Flask, FastAPI, React, Vue, GraphQL, REST, Next.js
Databases: MongoDB, MySQL, PostgreSQL, DynamoDB, Redis
Cloud and DevOps: AWS (EC2, S3, Lambda, CloudFront, CloudFormation, SQS), CI/CD/ DevOps, Docker, Kubernetes, Microservices
Testing and Methodologies: Pytest, Unittest, TDD, BDD
Tools and Platforms: Trello, Kanban, Git, Agile
Data Processing and Machine Learning: PyTorch, TensorFlow, Keras, Transformers, Kafka, LLMs, OpenAI API, LangChain, Deep learning, LLMOps

PROJECTS

Sentiment Analysis using BERT and Transformers

- Developed a sentiment analysis model leveraging **BERT** and **Hugging Face Transformers**, achieving an accuracy of 92%.
- Scraped over 18,000 reviews from Google Play for multiple apps and saved them to a CSV file, ensuring comprehensive data collection.
- Incorporated the BertModel to build a sentiment classifier, followed by training the model with the prepared data.
- Created a REST API for sentiment analysis using the trained BERT model, enabling easy integration and real-time analysis capabilities
- Leveraged **Python, pandas, google-play-scrapper, FastAPI**, and **PyTorch** for data processing, web scraping, API development and model training.

Traffic Sign Classification using Transfer Learning

- Built an image classification model using **Torchvision** to classify traffic signs.
- Leveraged transfer learning techniques to enhance the classification of traffic sign images.
- Fine-tuned a pre-trained model to accurately classify raw pixel data of traffic signs.
- Utilized a dataset containing 50,000 annotated images representing over 40 different traffic signs.
- Achieved a training accuracy of 99%, demonstrating the model's effectiveness.