Akshay Hebbar

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Education

Syracuse University   Syracuse, NY
Master of Science in Computer Science   August 2021 - May 2023
• **Coursework:** Algorithms, Operating Systems, AI, ML, NLP, Data Science, Data Mining, Reinforcement Learning

Visvesvaraya Technological University   Bangalore, India
Bachelor of Engineering in Computer Science and Engineering   August 2012 - May 2016
• **Coursework:** DBMS, Algorithms, Computer Graphics, Computer Networks, Linux, Discrete Math, C++, Java

Skills

Technologies: Python, Java, Spring Boot, JPA, Microservices, C++, SQL
Tools and libraries: AWS, Git, Junit, MongoDB, Docker, Kafka, Jenkins, Linux, Scikit, Keras, Tensorflow

Professional Experience

TruWeather Solutions, New York   Jul 2022 – Present
Data Scientist Intern   Python, TensorFlow, Keras, EDA, AWS, Lambda, CFD
• Successfully deployed LSTM model to **AWS** and exposed a **REST API** via AWS Lambda, enabling real-time wind data predictions with an average response time of 5 seconds while achieving an accuracy of 93%.
• Developed **Python scripts** to analyze and preprocess OpenStreetMap 3D data for use in CFD simulations, resulting in better accuracy and simulation time.
• Conducted **CFD** wind flow simulations with OpenFOAM on **HPC** instances using SLURM commands and analyzed the results to identify key factors impacting wind patterns, resulting in a 25% reduction in error compared to previous simulations.

DiemLife, New York   Feb 2022 – Jul 2022
Software Engineering Intern   Java, MySQL, Spring Boot, AWS, Docker, Google Cloud
• Created **SQL schema** to store and map existing users to their health data.
• Developed and deployed a **Spring Boot microservice** on an **AWS EC2** docker instance, enabling the retrieval of user health details from Google Fit. Created REST APIs for seamless access from the frontend.
• Developed functionality for fetching user activities list and persisting the same in database increasing user engagement by 10% in the platform.

Envestnet Yodlee, Bangalore   Jul 2016 – May 2021
Senior Software Engineering – R&D Team.   Java, Spring Boot, SQL, MongoDB, Kafka, Junit, Agile, REST
• Experience working with cross-functional teams and collaborating across teams for product development.
• Actively contributed to designing and developing a microservice architecture using Java, Spring Boot, JPA/JDBC and **MongoDB** (NoSQL) in an **Agile** environment.
• Designed SaaS application for account reconciliation with multithreaded producer-consumer architecture and distributed system using **kafka** to improve performance and application scalability (~150K per day).
• Introduced the concept of synthetic transactions for better account reconciliation process increasing data quality by 24%
• Developed industry standard code with **JUnit** test cases and created **CI/CD** pipelines using **perforce** and **Jenkins**.
• Led the team in creating transaction type prediction application in python with K-means **clustering** as part of hackathon.

Projects (https://github.com/AkshayHebbar)

ChatGPT download extension
• Created a application to convert ChatGPT conversations to PDF and download the data.
• Link: https://chrome.google.com/webstore/detail/gpt2pdf/gidebckbifledpbpoiadbkfonjniahkk

Monte-Carlo Tree search guided Genetic Algorithm   Syracuse University
• In this research, we investigate the possibility of applying a MCTS to genetic algorithms to explore the genetic tree structure and optimize the neural network weights. The new architecture introduces genetic action in the MCTS sequence.

Credit Card Fraud Detection   Syracuse University
• Developed credit card fraud detection code in python using Machine Learning algorithms such as SVM, Regression, Random Forest and ensemble methods and compared their accuracy to classify fraudulent transactions.

Text to Image GAN • Tweetrimony • Chain Reaction game AI agent • Web Scraping