SAURABH BHAUSAHEB ZINJAD

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EDUCATION

Arizona State University, Tempe, USA August 2023 - May 2025
Masters of Science in Computer Science (GPA: 4/4)

Relevant Courses: *Social Media Mining, Knowledge Representation and Reasoning Algorithms, Statistical Machine Learning*

Pune Institute of Computer Technology(PICT), Savitribai Phule Pune University, India July 2015 - June 2019
Bachelor of Engineering (GPA: 8.53/10)

Relevant Courses: *DSA, OOP, OS, System Programming, Computer Networks, Information Theory, Artificial Intelligence, Machine learning, Digital Video and Image Processing*

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, C#, C++, SQL, R, Java, Shell Scripting
Data Science: Databricks, PySpark, TensorFlow, PyTorch, MXNet, OpenCV, Scikit Learn, Pandas, Matplotlib, Keras
Cloud and DevOps: Azure, AWS, Docker, Kubernetes, MLFlow, Jupyter Notebook, Git
Full-Stack Tech: Angular, React, .Net Core, NodeJs, Django, Flask, FastAPI, MongoDB, SQL Server, MySQL, Postman
Certifications: **Deep Learning Specialization**, **MLOps for AI Engineers and Data Scientists**, **Microsoft Azure Fundar**

WORK EXPERIENCE

Tiger Analytics Bangalore, India
Senior Machine Learning Engineer June 2022 - July 2023

- Developed Interactive Dashboards, Constraint-based ML Models, Web App, Data & CI/CD pipelines and Comprehensive Documentation for MSP Value Optimization in Petcare sector with a team of 8 analysts.
- Created end-to-end MLOps platform by implementing research ideas, organizing through prototyping, backend API Implementation and Integrating it with numerous cloud services, attracting an additional four significant clients.

Winjit Technologies Pune, India
Software Engineer January 2020 - June 2022

- Engineered RESTful APIs Architecture and Distributed services; Designed low-latency responsive UI/UX application features with high-quality web architecture; Managed and optimized large-scale Databases.
- Designed a standardized solution for dynamic forms generation, with customizable CSS capabilities feature, which reduces development time by 8x; Led and collaborated with a 12 member cross-functional team.

Automation Teknix Pune, India
Deep Learning Engineer September 2019 - January 2020

- Devised a Lightweight Object Recognition Engine with a low computational cost by leveraging an SSD algorithm with MobilenetV2 architecture, which decreased survey error by 22%.
- Conducted thorough research; prototyped neural network flow; conceptualized POC, training, and monitoring of models. This resulted in a 7% increase in accuracy and reduced inference time by 2x.

PROJECTS

Streamlining Job Applications with LLM Automation Pipeline Oct 2023 - Dec 2023

- Developed Python library to optimize the job application workflow that generates curated resumes and personalized cover letters tailored to specific job roles.
- Utilized advanced techniques including Prompt Engineering, Web Scraping, and integration of various Large Language Models to enhance the effectiveness of the application.

Search Engine for All file types - Sunhack Hackathon - Meta & Amazon Sponsored 3 Nov 2023 - 5 Nov 2023

- Developed Python FAST API and Angular application, providing efficient data access and retrieval.
- Converted and stored every file type data as vector embeddings, ensuring low-latency search capabilities.
- Used Machine Learning techniques such as BERT, OCR, ResNet50, and Image Captioning to parse Image features.
- Contributed to Elasticsearch implementation for blazing-fast search responses, with millisecond response times.

GenAI's Capabilities and Boundaries Exploration - Prompt Engineering Hackathon for Humanities 13 Oct 2023 - 15 Oct 2023

- Crafted AI persona, to explore LLM's subtle contextual understanding and create innovative collaborations between humans and machines.
- Addressed limitations in narrative flow, simplicity, emotional depth, and hallucinations through innovative approaches.

- Demonstrated creative mindset and ability to navigate complex tasks and adapt to evolving requirements during hackathon.
- Successfully identified and addressed challenges in LLM's storytelling capabilities.
- Demonstrated the ability to navigate complex tasks and adapt to evolving requirements during the 17-hour hackathon.

Forest Fire Detection using IoT Sensor Data September 2021 - January 2022

- Devised a TabNet Classifier Model having 98.7% accuracy in detecting forest fire through IoT sensor data, deployed on AWS and edge devices 'Silvanet Wildfire Sensors' using technologies TinyML, Docker, Redis, and celery.
- Examine and utilize many performance metrics to reduce high type II error.
- Performed Model Exploration, Analysis, and Optimization.

Stock Market Analysis December 2018 - February 2019

- Conducted in-depth Exploratory Data Analysis (EDA) and utilized data visualization techniques for comprehensive stock market analysis. Implemented a range of statistical and ML models on diverse time-series stocks to extract insights and predictions. Improved performance by 27% on the "clustering and diversification analysis".

Autonomous Surveillance Monitoring System February 2019 - June 2019

- Built a surveillance engine to detect and alert about suspicious behaviors on campus by constructing a computer vision pipeline of CCTV footage data processing, face detection, poses & action recognition using OpenCV, MediaPipe, TensorFlow, MLFlow, and Flask. Finally, deployed it on college premises.

Speech Emotion Recognition November 2018 - February 2019

- Researched and optimized existing emotion detection approaches by combining CNN and LSTM networks. Discovered emotion-affecting attributes in voice by analyzing audio signal features-MFCC, ZCR, Pitch, and Chroma.
- Compressed audio data using an Autoencoder technique to avoid data loss. Due to this, boosted the accuracy of the speech model by 31%. Used tools like PyTorch, Librosa, puAudioAnalysis, and Tensorboard.

Homecoming: Animal Habitat Organization August 2018 - January 2019

- Developed a Custom Animal Identification and Classification model using Faster R-CNN architecture to identify animals and their habitats in a simulated environment, Integrated it into the Firebird V ATMEGA2560 Robot. Optimized the "Region Proposal Network" component resulting in 35% decrease in processing time.

ACHIEVEMENTS

1st runner-up in 'Prompt Engineering Hackathon 2023 for Humanities'

- Best Data Awards in Major League Hacking sponsored hackathon SunHacks 2023.
- Received the 'Extra Miller - 2022' award at Tiger Analysis for outstanding performance.
- President of Machine Learning Club: Led a team of 20 people in a project and was awarded 'Best Project of the Year 2019.'
- Finalist in E-yantra Robotics Competition 2018 - IITB.
- Dance Section's Head of PICT Art Circle: Best dance choreography for Winning 'Firodiya theater competition 2019.'
- Performed in multiple award-winning state-level drama competitions and received the best-organized team prize thrice.
- An active member of the NSS (National Community Service Group in PICT) in 2016.