

Saurabh Bhausahab Zinjad

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SUMMARY

Versatile and self-driven professional with 4+ years of industrial experience in crafting production-ready ML Architecture and full-stack softwares through coherent analysis, and relentless focus on efficient solutions with meticulous execution.

EDUCATION

Masters of Science in Computer Science

August 2023 - May 2025

Arizona State University, Tempe, USA

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Coursework: Social Media Mining, Knowledge Representation and Reasoning Algorithms, Statistical Machine Learning.

Bachelor of Engineering

July 2015 – June 2019

Pune Institute of Computer Technology(PICT), Savitribai Phule Pune University, India

8.53/10

Coursework: Data Structure and Algorithms, Object Oriented Programming, Operating System, System Programming, Computer Networks, Information Theory, Artificial Intelligence, Machine learning, Digital Image, and Video 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, Numpy

Cloud and DevOps: Azure, AWS, Docker, Kubernetes, MLFlow, Jupyter Notebook, Git

Full-Stack Technologies: Angular, React, .Net Core, NodeJs, Django, Flask, FastAPI, MongoDB, SQL Server, MySQL, Postman

WORK EXPERIENCE

Senior Machine Learning Engineer, Tiger Analytics, Bangalore, India

June 2022 - July 2023

- Spearheaded development of Data & CI/CD pipelines, Interactive Dashboards, Constraint-based ML Models, Web App, and Comprehensive Documentation for MSP Value Optimization in Petcare sector with a team of 8 analysts. **(Team Leadership)**
- Developed *MLCORE* product (end-to-end MLOps platform) by implementing research ideas, organizing through prototyping, and Integrating it with numerous cloud services, attracting an additional four significant clients. **(Interpersonal Skills)**

Software Engineer, Winjit Technologies, Pune, India

January 2020 - June 2022

- Engineered 10+ RESTful APIs Architecture and Distributed services; Designed 30+ low-latency responsive UI/UX application features with high-quality web architecture; Managed and optimized large-scale Databases. **(Systems Design)**
- Initiated and 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. **(Idea Generation)**

Deep Learning Engineer, Automation Teknix, Pune, India

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%. **(Problem Identification)**
- Conducted thorough Initial research; prototyped deep learning flow; conceptualized POC, training, and monitoring of models. This resulted in a 7% increase in accuracy and reduced inference time by 2x. **(Experiment Design)**

Research Intern, IMATMI, Robbinsville, New Jersey (Remote)

March 2019 - August 2019

- Conducted research and developed a range of ML and statistical models to design analytical tools and streamline HR processes, optimizing talent management systems for increased efficiency. **(Corporate Research)**
- Created '*goals and action plan generation*' tool for employees, leveraging their weaknesses to facilitate professional growth.
- Implemented an automated system to identify '*best-fit employees*' for upcoming projects, improving project outcomes and resource allocation for managers. **(Product Idea Execution)**

PROJECT EXPERIENCE

Detecting Forest Wood Fire using IoT Sensor Data, Omdena, New York

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*. **(Volunteer work)**
- Examine and utilize many performance metrics (*Recall*, *F2 score*, *sensitivity*, *specificity*. etc.) to reduce high type II error.
- Performed Model Exploration, Analysis, and Optimization. **(Client Advisory)**

Stock Market Analysis, New Delhi, India

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". **(Quantitative Analysis)**

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Autonomous Surveillance Monitoring System, Startup & Innovation Cell, PICT, Pune

February 2019 – June 2019

- At a college-sponsored project, I 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, We deployed it on college premises. **(Team Collaboration)**

Speech Emotion Recognition, PICT, Pune

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. **(New Techniques)**
- Compressed audio data using an Autoencoder technique to avoid data loss. Due to this, we were able to boost the accuracy of the speech model by 31%. Used tools like PyTorch, Librosa, puAudioAnalysis, and Tensorboard. **(Process Optimisation)**

Homecoming: Animal Habitat Organization, Eyantra, IIT Bombay, India

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, which Integrated it into the Firebird V ATMEGA2560 Robot (we tailored it to put animals into a habitat). Optimized the "Region Proposal Network" component resulting in 35% decrease in processing time.

CERTIFICATIONS/ADDITIONAL COURSES

- [Deep Learning Specialization](#) - DeepLearning.AI, Coursera Inc.
- [MLOps for AI Engineers and Data Scientists](#) - Omdena Inc.
- [Microsoft Azure Fundamentals](#) - Udemy.
- [Server-side Backend Development](#) - The Hong Kong University of Science and Technology.
- [Front-End Web UI Frameworks and Tools](#) - The Hong Kong University of Science and Technology.

ACHIEVEMENTS/CO-CURRICULAR/EXTRACURRICULAR

- Received the 'Extra Miller - 2021' award at Winjit Technologies 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."
- 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.