

AMMAR FITWALLA

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Software Engineer with 6+ years of experience in backend development, deep learning, forecasting, NLP, and computer vision, specializing in automating ML solutions.

Passionate about solving complex business problems through innovative and efficient analytical solutions.

Holds a Master of Engineering in Information Technology from the University of Mumbai.

EDUCATION

Master of Engineering, Information Technology – 2021
University of Mumbai

Bachelor of Engineering, Computer Engineering – 2017
University of Mumbai

WORK EXPERIENCE

System Engineer, Tata Consultancy Services March, 2022 – Present

- Developed and optimized AI-driven forecasting models using Time Series algorithms (ARIMA, Prophet) to predict business trends, enhancing operational efficiency.
- Automated data pipelines using Jenkins to deliver high-quality data to our AI models, reducing manual intervention by 80% ensuring timely and accurate predictions.
- Developed REST APIs using Python Flask Framework to provide intuitive UI screens, making it easy for end users to access and interpret predictive insights.
- Led full Software Development Life Cycle, from ideation to deployment and ongoing operation, ensuring timely delivery of software product.
- Employed Agile/Scrum methodologies, participating in sprint planning, daily scrums, sprint reviews, and sprint retrospectives.
- Consistently completed an average of 5 complex tasks per sprint, improving sprint efficiency by automating manual processes and reducing backlog by 20%.

Data Scientist, KernelSphere Technologies LLC January, 2021 – February 2022

- Built a Machine Learning system to predict Forex trends by analysing historical data (30GB+) and training LSTM models, achieving 60% accuracy in back-tested predictions for currency pairs like EUR/USD.
- Moved the system to AWS for scalability: Automated weekly retraining of models with new data stored in cost-optimized S3 buckets, deployed models as real-time APIs using SageMaker, and reduced cloud costs by 40% with spot instances.
- Created a Django web app hosted on an AWS EC2 instance, integrated with AWS services to display live Forex trend predictions. Optimized dashboard performance by 35% using PostgreSQL with indexed tables.
- Built NLP models to extract financial insights from unstructured PDFs, successfully achieving 80% accuracy in extracting key financial data, improving analytical workflows.

Machine Learning Engineer, KernelSphere Technologies LLC June, 2019 – January 2021

- Built Deep Learning models in the healthcare domain that classify various diseases with 90% accuracy within a fraction of seconds, reducing the time for diagnosis and improving patient outcomes.
- Applied CNN, R-CNN and YOLOv3 to detect objects in high-resolution civil engineering drawings (~3000x3000 pixels), having accuracy of ~70% to 80%.
- Created custom algorithms to store extracted information from drawings in a structured format, reducing time for data retrieval and improving accessibility to important information.

Innovative Projects, Ammar Fitwalla

- Built a [no-code](#) ML pipeline automation tool using [Django](#), allowing users to perform Exploratory Data Analysis (EDA), feature engineering, and model training seamlessly with a single click.
- Developed and deployed a Django-powered society maintenance app that enables the storage and management of flat owners' data and monthly maintenance bills, achieving a 50% decrease in user workload and complete preservation of the society's past data.

SKILLS

- **Machine Learning and Computer Vision**
 - LLM, Tensorflow, Scikit-Learn and Pytorch
 - EDA, Data Processing and Model Building
 - Image Processing and Analysis
 - Deep Neural Networks & Graph Neural Networks
- **Web Development**
 - Python
 - Django, Flask & FastAPI
 - Back-End REST API development
- **Software Engineering**
 - Software Development Life Cycle (SDLC)
 - Git and Gerrit
 - Agile Methodologies
 - Continuous Integration and Continuous Delivery (CI/CD)
- **Cloud**
 - AWS S3, SageMaker, EC2
 - Google Cloud Platform (GCP)
 - Docker, Kubernetes (K8S)

LICENSES AND CERTIFICATIONS

- **Python 101 for Data Science** – Cognitive Class – [Credential Link](#)
- **Business Intelligence and Data Analytics** – The Sparks Foundation – [Credential Link](#)
- **Artificial Intelligence Foundations: Machine Learning** – LinkedIn

AWARDS

- TCS Star of the Month Award – September 2022

ACTIVITIES

- Published [Research paper](#) in INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY (IJERT).
- Delivered a guest lecture on [AI](#) and [IoT](#) at Vidyalkar Institute of Technology, educating students on real-world [AI](#) and [ML](#) workflows.