

# Wasimuddin Salar Fathimullah

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## Summary

Machine Learning Engineer | NLP, Federated Learning & Predictive Modeling | Pega Certified Senior System Architect  
3+ years designing and deploying scalable AI solutions across research and industry. Proficient in Python, PyTorch, TensorFlow, and GCP. Delivered production-grade ML models (federated learning, NLP, anomaly detection) with strong expertise in data engineering and stakeholder reporting. Skilled at translating complex datasets into actionable insights for real-world decision-making.

## Skills

**Languages:** Python (NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn), R, C

**Frameworks:** Flask, PyTorch, TensorFlow, Keras, Vision Transformers, Federated Learning, Hugging Face (NLP), FastAPI

**Developer Tools:** Git, Docker, Google Cloud Platform(BigQuery, Cloud Storage), VS Code, Matlab

**Certifications:** Pega [CSA, CSSA], Google Data Analytics [Coursera], Machine Learning [Coursera], Deep Learning [DataCamp]

## Professional Experience

### Southern Illinois University Carbondale

Carbondale, IL

Technical Assistant (Volunteer)

July 2024 – Present

- Transformed 1000+ housing records into actionable insights using statistical modeling (Pandas) and visualization (Seaborn).
- Implemented 12 survey workflows via Qualtrics, boosting engagement and feedback quality by 20%.
- Built predictive dashboards (Scikit-learn, Matplotlib) to streamline resource allocation, reducing under-utilization by 15%.

Graduate Assistant

August 2022 – May 2024

- Leveraged NLP-based sentiment analysis on student feedback to boost inclusivity and slash housing vacancy rates by 10%.
- Unified Navigate and Advocate platforms to automate resident concern triage, reducing average resolution time by 50%.
- Recruited and mentored new staff on data-driven decision-making, contributing to a 95% student retention rate.

### Tata Consultancy Services

Chennai, India

Assistant System Engineer (Software Engineer)

May 2021 – June 2022

- Automated operational reporting using Python scripts, increasing efficiency by 25% and client satisfaction by 15%.
- Deployed ML-based anomaly detection models with the data science team to enable early identification of critical issues.
- Reduced application downtime by 40% through troubleshooting Pega systems, while ensuring a 95% Guardrail score.

### SuBrains Solutions Pvt. Ltd.

Hyderabad, India

Python Developer Intern

December 2020 – April 2021

- Contributed to the enhancement of ML pipelines for AI-driven e-learning modules, improving personalization by 30%.
- Trained ML classifiers on 10,000+ user interactions, optimizing content delivery and raising module completion by 25%.
- Integrated ML model outputs into production-ready features within Agile sprints with cross-functional teams.

## Projects

### Federated Learning IDS for Autonomous Vehicles [Github]

Graduate Project

- Engineered a PyTorch-based Intrusion Detection System (IDS) using Vision Transformers in a federated setup, achieving 90% detection accuracy, reducing false positives by 15% and boosting decentralized traffic sign recognition security by 40%.

### Marketing Campaign and Loan Status Predictor [Github]

Machine Learning and Soft Computing

- Built ensemble models (Decision Tree, KNN, Naive Bayes) forecasting term deposit subscriptions and loan eligibility at 97% accuracy, with a differential privacy mechanism to protect sensitive PII during model training and inference.

## Education

### Southern Illinois University Carbondale

Carbondale, IL

Master of Science, Computer Science | GPA: 3.879/4

August 2022 – May 2024

### Koneru Lakshmaiah Deemed University

Vijayawada, India

Bachelor of Technology, Electronics and Communication Engineering | GPA: 9.03/10

July 2017 – April 2021