

Ganesh Prabhu

Stillwater, OK | 4053320524 | ganeshprabhu7@gmail.com | [LinkedIn](#)

Professional summary: Innovative Software Engineer with expertise in feature engineering, machine learning, scalable system design and distributed systems. Proficient in building production-ready ML pipelines, integrating SQL/NoSQL databases, and optimizing deployments with CI/CD practices. Proven ability to improve system efficiency by 30% while leveraging Explainable AI to enhance transparency and accelerate real-time AI workflows.

Work Experience

Oklahoma State University

Stillwater, Oklahoma, USA

Machine Learning Researcher

Sept 2023 – Dec 2024

- Developed a machine learning based intrusion detection system, achieving an 18% improvement in detection accuracy by employing SMOTE for class balancing, one-hot encoding, and PCA for dimensionality reduction.
- Built Python SDKs and CLI toolkit to streamline integration with data pipelines and model-serving systems, enabling efficient workflows and reducing manual overhead.
- Implemented and maintained scalable APIs integrated with CI/CD frameworks, automating testing, deployment, and monitoring processes, which reduced release cycles by 35% and ensured real-time feature retrieval with 99.99% uptime.
- Automated data preprocessing pipelines with pandas, NumPy, and scikit-learn, boosting throughput by 40% and ensuring data quality.
- Architected end-to-end workflows for feature development, iterative model training, and production serving, leveraging Docker, Kubernetes, and PostgreSQL to handle datasets exceeding 1 million rows.

Aditya Birla Grasim Industries Limited

Karwar, Karnataka, India

Systems Engineer

Mar 2021 – Mar 2022

- Boosted efficiency by 30% for software systems serving 1K+ daily users by optimization and streamlined backend development processes.
- Enhanced fault prediction accuracy to 80% by integrating advanced machine learning models into monitoring systems, enabling proactive maintenance and reducing downtime.
- Implemented automation workflows for 2 MVA UPS, integrating fault-tolerant controls and real-time monitoring to ensure uninterrupted power supply and system scalability.
- Accelerated PCB deployment time by 15% through workflow optimization and automated testing, accelerating production cycles.
- Generated actionable insights with data analytics, creating visualizations to drive strategic decisions and enhance operational performance.

Nuclear Power Corporation of India

Kaiga, Karnataka, India

Electrical Engineer Intern

Jan 2019 – Jan 2019

- Streamlined PLC circuit diagnostics with Python automation scripts, reducing downtime in critical infrastructure by 15%.
- Diagnosed and resolved network issues, ensuring optimal performance and security of critical infrastructure

Skills

- **Programming Languages:** Python, Java, C/C++, C#, Bash, JavaScript, Go, Kotlin, HTML, CSS, PHP, Dart
- **Frameworks and Libraries:** React, Node.js, Express.js, Flask, Bootstrap, Flutter, Docker, Kubernetes, TensorFlow, PyTorch, scikit-learn, Hugging Face Transformers, BERT, LangChain
- **Tools and Platforms:** Jenkins, Prometheus, Grafana, Power BI, Tableau, Git, Apache, Nginx, Unity, Multisim, LabVIEW, MATLAB
- **Databases and APIs:** MySQL, PostgreSQL, MongoDB, Redis, REST, FastAPI, Elasticsearch, OpenAI API, Google Cloud NLP

Projects

Predictive Threat Detection System

- Built high-accuracy classification models using Random Forest and Decision Trees, achieving a balanced dataset and a 15% improvement in performance metrics with SMOTE and hyperparameter tuning and improving response times for cybersecurity incidents.
- Developed Explainable AI solutions like LIME, to interpret model predictions and provide actionable insights, enhancing stakeholder confidence and streamlining threat mitigation.

Time Series Analysis and Forecasting of Sales Data

- Analyzed time series sales data using ARIMA models and automated parameter tuning with pmd-arima, achieving accurate forecasts with minimal error and enabling data-driven business decision-making.
- Engineered data pipelines for preprocessing, merging external factors, and visualizing trends using Pandas, Matplotlib, and Statsmodels, uncovering actionable insights on seasonality and external variables' impact.

Education

Master of Computer Science, Oklahoma State University, Stillwater - Dec 2024

Bachelor of Electrical & Electronics Engineering, SDM College of Engineering and Technology, India - Aug 2020

Achievements and Professional Skills

Achievements: Certified in [Tableau](#), founded a gaming club with 100+ members organizing events to foster engagement and collaborations.

Competencies: Articulate Communicator, Problem Solving, Time Management