

KEERTHI CHOWDARY GOGINENI

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EDUCATION

Michigan State University, East Lansing, MI

Dec 2024

Master of Science in **Computer Science**

GPA – 3.875

Michigan State University, East Lansing, MI

May 2023

Bachelor of Science in **Computer Science**

GPA – 3.70

- Minors - Data Science | Computational Mathematics, Science, and Engineering | Business.

TECHNICAL SKILLS

- **Programming Languages:** Python, R, SQL, MySQL, PostgreSQL, C, C++, HTML, Assembly, CSS, Shell.
- **Big Data & Distributed Systems:** Apache Spark, Apache Kafka, Hadoop, Flink, Docker, Kubernetes, CI/CD.
- **Machine Learning & AI:** TensorFlow, PyTorch, Scikit-learn, Keras, XGBoost, LightGBM, OpenCV, NLTK.
- **Cloud Services:** AWS (EC2, S3, DynamoDB, Lambda), Azure.
- **Data Analytics & Tools:** Pandas, NumPy, MATLAB, Tableau, Regression Analysis, PCA, A/B Testing.
- **Web & App Development:** Django, React Native, Flutter, HTML, CSS, API, Unreal Engine.
- **Courses:** Machine Learning, AI, Data Analytics, Biometrics and Pattern Recognition, Algorithm Engineering.

WORK EXPERIENCE

Data Scientist (Data & Systems)

Mar 2023 - Present

AppLab Systems, Remote

- Designed and enhanced scalable ETL pipelines using AWS and Python, reducing data ingestion and transformation times by 40% while ensuring reliability.
- Analyzed customer behavior trends with Python Pandas on key metrics, leading to 25% increased user engagement through data-driven app improvements.
- Built and deployed AI/ML models to predict user behavior, increasing recommendation accuracy and boosting retention by 15%.
- Enhanced database performance by refactoring SQL queries and indexing strategies, reducing query response times by 50% for large-scale datasets.

Machine Learning Engineer

Jun 2024 – Dec 2024

Plant Biology Research Lab, MSU, East Lansing, MI

- Engineered data pipelines processing 1M+ biological records, increasing transformation efficiency by 40% through Pandas and SQL operations.
- Applied ML techniques (PCA, regression) to analyze the impact of environmental factors on plant growth, contributing to 3+ research publications.
- Developed AI-driven visualization tools to detect plant growth patterns, improving growth trend forecasting accuracy by 25% and aiding decision-making.

Teaching Assistant – Data Science & Engineering

Aug 2023 – Dec 2024

Michigan State University, East Lansing, MI

- Delivered 40+ lectures on Python, statistical analysis and data visualization techniques to 1,300+ students.
- Mentored students in using Python, NumPy, and Pandas for data processing, feature engineering and model building, improving the project efficiency by 30%.
- Designed ML and data mining projects, teaching students in applying machine learning algorithms to real-world datasets.

Software Engineer – Real-Time Systems & Networking

Jan 2023 – May 2023

General Motors (CAPSTONE Project), Detroit, MI

- Created a VR-based network monitoring tool in Unreal Engine 5 using C++, MySQL, and WireShark, reducing infrastructure error diagnosis time by 50% through real-time visualization.
- Optimized MySQL queries and automated data pipelines, improving real-time analytics for 10,000+ network nodes, enhancing system performance.

President

Nov 2020 – May 2023

ACM, Association for Computing Machinery Club, East Lansing, MI

- Led ACM board meetings, organized industry tech talks, and collaborated with companies, increasing research projects by 20%.
- Revamped 10+ coding events, AI/ML competitions, and interest groups, doubling student proficiency in machine learning and algorithms.

Data Engineer Intern

Aug 2020 – Jan 2021

Varadhi Smartek, Bangalore, Karnataka, India

- Architected PostgreSQL database structures and APIs using Python and Django, enabling real-time data tracking and analysis of 5000+ student activities for the 'PatashalaAIO' school management system.
- Managed and enhanced data storage and retrieval processes, ensuring seamless data access across 30+ modules by deploying scalable solutions on AWS.

PROJECTS

AI/ML Project: Predictive Analytics System

Feb 2024 - Apr 2024

- Built an advanced predictive analytics system with 1M+ customer behavior data points using Python, TensorFlow, and PyTorch increasing forecast accuracy of market trends by 25%.
- **ETL Pipeline Development:** Engineered an ETL pipeline with Apache Kafka for real-time data streaming and pandas for data transformation, reducing processing time by 40% and increasing accuracy by 15%.
- **Statistical Analysis:** Conducted regression analysis, PCA, and time series analysis to identify key behavioral trends, improving prediction accuracy by 20% through A/B testing and model validation.

Biometric Security Project: Multimodal AI/ML Models for Authentication

Jan 2024 - Apr 2024

- Constructed AI/ML models for biometric recognition using TensorFlow and Scikit-learn, with over 95% accuracy with the help of market and product analysis to identify key biometric features.
- Developed algorithms to detect presentation attacks, reducing false acceptance rates by 30% and enhancing system security, achieving F1-scores over 0.90.

Full Stack Developer, High-Traffic Web Application.

Nov 2023 – Jan 2024

- Launched a full-stack web app on AWS with React and Node.js, managing over 100,000 concurrent users and ensuring high performance with MongoDB.
- Processed 50,000+ biometric records using Python Pandas, applying PCA for 60% dimensionality reduction, and used regression analysis, MLE, and Bayesian Estimation for optimization.
- Outlined and implemented RESTful APIs to streamline between server and client-side, reducing data retrieval time by 50% and increase user satisfaction by 40%.
- Refined application deployment and scalability deploying Docker and Kubernetes, resulting in a 40% improvement in deployment speed and system resilience.

Fake News Detection

Dec 2023

- Created a real-time fake news detection model with 97% accuracy using Naive Bayes, SVM, and Decision Trees, improving detection through Python Pandas for efficient data preprocessing and transformation.
- Improved model efficiency by implementing regression analysis and PCA, achieving a 15% boost in accuracy while refining real-time detection performance by 20% to process data more swiftly.

LANGUAGES: English, Telugu, Hindi, Tamil.