Trishal Reddy Indireddy

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Summary

Software Developer with expertise in C++ and Python, specializing in backend development and distributed computing. Experienced in designing scalable, data-driven applications and applying advanced algorithms for impactful solutions. Certified in AWS Cloud, with practical experience in cloud, security, and automation tools. Eager to leverage technical skills to enhance backend engineering projects.

Education

Binghamton University, State University of New York
Master's, Computer Science (GPA: 3.53/4)
- **Coursework:** Design Analysis and Algorithms, Database Systems, Science of cybersecurity, operating systems, computer architecture and organisation, Design patterns, programing languages, Intro to computer security, topics in data privacy, Social media data science pipeline

Indian Institute of Information & Technology, kottayam
Bachelor of Technology, computer science & engineering (GPA: 3.6/4)

Work Experience

BINGHAMTON UNIVERSITY | *Research intern*   Jan 2025 - Oct 2025
- Developed a scalable **PySpark** pipeline to preprocess **large-scale social media datasets** and applied **transformer-based models (DistilBERT, RoBERTa, ViT)** to classify **AI-generated** versus **authentic content**. Implemented **clustering** and **visualization workflows** with **LDA** and **Plotly** to identify misinformation **patterns and trends**.

Bright Curve IT Solutions | *Software Developer*   Aug 2021 - Jun 2023
- Designed and constructed an **orchestrated pipeline** to process **Outlook emails**, extracting log paths and parsing log content with **Python**, while fine-tuning and embedding an **LLaMA model** to facilitate **test case generation**, boosting debugging efficiency.
- Deployed a **Jenkins-based automation system** leveraging **TF-IDF matching algorithms** to detect duplicate issues, reducing manual effort by **60%** and ensuring timely developer feedback through automated email responses.
- Refactored a **legacy codebase** into modular, **cloud-native microservices** using **Spring Boot, Docker, and Kubernetes**, improving deployment frequency by **18%** and streamlining **CI/CD automation**.
- Implemented **RESTful APIs** to exclude high-propensity users from promotional offers, driving a **17% revenue boost** for clients.
- Developed **real-time Grafana dashboards** integrated with **Slack** and **Splunk** for proactive monitoring and alerting, cutting incident resolution time by **45%** and enhancing system visibility.

Bright Curve IT Solutions | *Software Developer Intern*   Jan 2021 - Apr 2021
- Built a **RESTful microservice** to optimize offer distribution, reducing response time by **40%** for over **15,000 daily users**.
- Improved reliability by achieving **80% unit test coverage** through **TDD**, reducing production bugs by **25%**.
- Resolved over **300+ real-time bugs** during deployment, significantly enhancing **system stability** and minimizing release issues.

Project Experience

Social Media Election Analysis Platform   Sep 2024 - Dec 2024
- Developed a **data pipeline** to collect **2024 US presidential election discussions** from **Reddit** and **4chan** with **OAuth authentication**, **rate limiting**, and **concurrent processing**.
- Designed scalable **PostgreSQL architecture** with **normalized schemas** and **batch insertion**, achieving **90%+ uptime** and **127K+ Reddit posts** and **204K+ 4chan entries per day**.
- Gained experience in **real-world data collection challenges**, tackling **API limitations**, **dynamic data filtering**, and **system maintenance** for **continuous data flow**.

Crime Analysis and Prediction System   Oct 2022 - Mar 2023
- Developed a **predictive analytics system** using **PySpark** and **distributed Spark clusters** to forecast **crime patterns** and identify **high-risk areas** through **historical crime data analysis**, implementing **Prophet** and **Keras stateful LSTM models** for accurate **location-based crime prediction**.
- Engineered a **scalable data processing pipeline** using **Pandas API** and **advanced machine learning techniques** to generate **crime hotspot visualizations**, enabling **law enforcement agencies** to optimize **resource allocation** based on **temporal and spatial crime patterns**.

Technical Skills

- **Languages:** Python, Java, C, C++, JavaScript
- **Software And OS:** Visual Studio Code, Jupyter Notebook, Git, Atom, XCode, Android Studio
- **Additional:** HTML, CSS, Bootstrap, TCP/IP, SQL, React, MongoDB, Tableau, NodeJS, Web Scraping using Python, Bash, RESTful APIs, Agile and Scrum, Docker, Kubernetes, OAuth, Postman, Linux, Object Oriented Programming, PostgreSQL, NoSQL, uipath, Automation, uipath, power automate, Web Security, TimescaleDB, PySpark, Pandas, AWS EC2, ETL Pipelines, Matplotlib, NumPy, ML models, DynamoDB, LLM Fine-tuning & Embeddings, CI/CD, Splunk, Grafana
- **Certifications:** Full Stack Web Development, Advanced Algorithms, Java and SQL, AWS Cloud Practitioner
- **Soft Skills:** Curiosity, Problem-Solving, Critical Thinking, Adaptability, Attention to Detail, Communication Skills, Leadership, Initiative & Proactiveness, Analytical Skills

EXTRACURRICULAR ACTIVITIES

Indian Institute of Information & Technology | *Captain*
- **Captain** of our college **Cricket** & **Badminton team**, representing at **National-level Inter IIIT Sports Meet**.

National level Wrestler
- During my high school time, I represented my state in a national-level wrestling competition.

Sodexo | *Student manager*
- During my master's, I worked as a student manager in the place i worked, where i managed more than 20 students.