

# CLAY TRUELOVE

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## Education

### The University of Alabama

*Bachelor of Science in Computer Science*

December 2024

*Tuscaloosa, AL*

## Experience

### CrowdStrike

January 2025 - May 2025

*Data Engineer I*

*Remote*

- Supported a distributed ETL pipeline processing billions of daily events from Kafka, enriching events with ML predictions, and storing in Cassandra.
- Identified and debugged a race condition in a Go service, preventing data loss by implementing proper synchronization mechanisms to ensure data consistency in concurrent method.
- Conducted the discovery and planning phase of a major Cassandra cluster migration, writing formal documents, collecting volume metrics, and coordinating meetings across 6+ engineering teams.
- Enhanced ML model infrastructure by refactoring Dockerfiles to use distroless images, reducing attack surface and meeting internal security standards.
- Triaged microservice issues from internal and external customers using Grafana, Prometheus, and LogScale.

### CrowdStrike

June 2024 - August 2024

*Software Engineer Intern*

*Remote*

- Developed a Python tool to efficiently detect and locate inconsistencies in large-scale customer data collections.
- The tool reduced current testing time by over **90%**, and was adopted by the team for use in CI/CD pipelines.
- Used the python tool to detect and specifically locate a major data ingestion bug affecting customers.
- Worked on an agile team, using Jira for planning and issue tracking, and Git for version control.

## Projects

### Distributed File System | *Golang*

- Constructed a P2P network where each node can act as a client or a server.
- Implemented a custom TCP protocol for reliable and accurate transfer of data between the nodes.
- Partitioned, replicated, and distributed data across nodes, enabling load balancing and increasing fault tolerance.
- Utilized locks, allowing multiple nodes to asynchronously send or receive chunks of data while remaining consistent.

### Remnant | *Android Studio, Kotlin, Python, Flask, Docker, PostgreSQL, AWS EC2*

- Worked on a team conducting weekly stand-ups, emphasizing communication to design an Android App.
- Designed and constructed a database with proper normalization to prevent data redundancy and support scalability.
- Developed and tested API endpoints to allow for quick data retrieval and proper error handling.
- Created UI elements, ViewModels, and API requests in Kotlin.

### Sentiment Analysis Model | *HTML, CSS, Javascript, Python, Flask, Keras, Heroku*

- Used Pandas and the Natural Language Toolkit to process and clean raw data to increase model accuracy.
- Implemented a neural network using Keras that achieved test accuracy of 89%, showing strong model performance.
- Built an API using Python and Flask that receives user input and routes it to the trained model.

## Technical Skills

**Languages:** Golang, Python, SQL, CQL,

**Technologies/Frameworks/Tools:** Linux, Git, Kubernetes, Docker, Pytest, Boto3, Astral UV, Graphite, Grafana, Prometheus, LogScale, Kafka, Docker

**Concepts:** Agile Methodology, Data Science, API Development, CI/CD Principles, Jenkins, Kubernetes, Automation Testing, Networking