

CHOUDHRY ABDULLAH

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Education

Trinity University

May 2026

B.S in Computer Science

GPA: **3.87**

- Coursework: Algorithms, Big Data and Machine Learning, OOP Design Patterns and AGILE Software Development
- Dean's List **4x**

Technical Skills

Programming Languages: JavaScript/TypeScript, Python, Java, Haskell, C, C++, Bash, MIPS Assembly and Scala

Database: MySQL, PostgreSQL and MongoDB

Web Frameworks: Scala-play, Express, Nodejs, Nextjs, React, HTML, CSS, Tailwind CSS, Playwright

Machine Learning: LangChain, RAG, Numpy, Pandas, PyTorch

Development Tools: GitHub, Playwright, Splunk, WireShark, Linux, Spark, PyTorch, Pandas, NumPy

Experience

Software Development Intern

June 2024 - Present

Better Futures Institute

- Leveraged **Playwright** to write and execute robust end-to-end tests, reducing testing time by **80%**
- Constructed **CI/CD** pipeline using **Github** workflows, automating testing to reduce development time by **25%**
- Optimized **React** component rendering on the application to improve loading time by **30%**
- Implemented an AI chatbot using **LangChain** with **RAG** - causing **20%** increase in user satisfaction

Teaching Assistant

Fall 2024

Trinity University CSCI 3322 - Algorithms

- Leading the preparation and grading of homework and quizzes for **60+** students
- Instructing students on Algorithmic problems for upper-division class for **4 hours** weekly

Tutor

September 2023 - Present

Association for Computing Machinery

- Providing clear and effective tutoring **8hr/week** to **100+** students
- Mentored the development of **30+** projects using tools like Scala Play, Express, MIPS Assembly and C

Web Development Intern

September - December 2023

Strategic Communication and Marketing - Trinity University

- Worked closely with the web development team to conceive, develop, and maintain Drupal-based webpages
- Played a key role in configuring and customizing modules, themes, and templates to align with project requirements
- Managed seamless transition of over 4000 webpages from Drupal 9 to Drupal 10, updating pages to the latest standards

Projects

PotHole Analysis for City of San Antonio 🔗

Summer 2024

- Analyzed over **60,000** rows of data using Tableau and Python (pandas, numpy and PyTorch)
- Developed an interactive dashboard using Next.js and Shadcn UI library catering over **100+** users
- Leveraged **SARIMA** Machine Learning model to detect and visualize seasonal patterns in data

Research: Hyper-Parameter Optimization and Simplifying ML models 🔗

Summer 2024

- Formulated a research project with Dr. Eva Tuba to research hyper parameter optimization for **CNN**
- Implemented and Optimized starnet using **PyTorch and Numpy**
- Optimized and fine tuned model to increase accuracy from **67.3** to **69.2**

Research: Hate Speech Detection for Resource Poor Languages

Summer 2023

- Formulated a research project with Dr. Eva Tuba to research Hate Speech Detection for resource poor languages
- Implemented and fine tuned MuRil -a Large Language Model based on Transformer architecture using pyTorch
- Collected and Cleaned a corpus of **5000** Urdu Tweets using web scrapping - Scrapy
- Model achieved F1 score of **92.34** on Hate Detection Task

Class Schedule Calendar 🔗

August-September 2023

- Devised a program to create calendar events from an input of a picture of a student's schedule for **2500+** students
- Implemented Tesseract - an Optical Character Recognition Model - to detect calendar events
- Integrated the script with Next.js to have a user friendly single page application reducing task completion time by **50%**