

Christopher Oosthuizen

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EDUCATION

B.S. in Computer Science

Aug 2022-May 2026 Expected

University of Houston | Overall GPA: 3.2 | Major GPA: 3.4

Houston, TX

SKILLS

Programming Languages | Java, Python, C/C++, Rust, JavaScript, HTML/CSS, and MySQL.

Frameworks/Libraries | React, Svelte, Django, Express.js, Fast API, Pytorch, Huggingface, OpenAI, Llama_Index, Langchain, NodeJS, Neo4j, NetworkX, Pytorch Geometric, Pandas and Ncurses.

TOOLS | Git, Github, Google Cloud, AWS, Google Test, Deepeval, Docker, and Linux.

EXPERIENCE

Undergraduate Research Assistant

Sep 2023-Present

Structures and Artificial Intelligence Lab

Houston, TX

- Developed LLM driven Knowledge Graph creation system that had an 83% increase in structural quality over existing methods, by leveraging advanced training techniques like Direct Preference Optimization. Github: [link](#)
- Reduced hallucinations in Llama3 by 63% by utilizing Graph Retrieval-Augmented Generation.
- Improved Knowledge Graph generation time by 341% by optimizing chunking size and LLM token limits.

Chlk

Nov 2023-Feb 2024

Software Engineer | React, AWS | [link](#)

Houston, TX

- Built an AWS hosted football playmaking graphics editor for over 600 football coaches, by working on contract with a team of 3 other developers.
- Expanded undo/redo features by 62% with a custom hashing algorithm, improving user experience and efficiency.

PROJECTS

ABlaze- Programming Language | C++ | [link](#)

Dec 2020-Apr 2021

- Launched a general purpose programming language that achieved execution speeds 152% faster than Python by using custom bytecode compilation.
- Wrote 59670 lines of code entirely from scratch with no dependencies.

DJ Layover- Code Red Genesis Hackathon | React, Huggingface, Fast API | [link](#)

February 2024

- Using Generative AI and the Data Flights API, made a full stack web application that found users' flights and generated a personalized playlist for each trip.
- Put out a survey that found 84% user stratification with generated playlists.

AWARDS

Summer Undergraduate Research Fellowship

Aug 2024

- Selected for research excellence out of 500 students to receive a \$4000 fellowship in order to work full time in a research lab for 10 weeks.

EXTRA CURRICULAR

Web Development | CougarCS | React, Express.js

Aug 2023-Present

- Increased web traffic by 33% on CougarCS.com through a comprehensive website revamp.

Tutor | CougarCS

Sep 2023-Present

- Volunteered 25 hours a semester to support over 50 students, in programming and data structures classes.

Relevant Coursework

Data Science I, Natural Language Processing, Deep Learning, Programming and Algorithms, Programming and Data Structures, Computer Architecture, Statistics, and Linear Algebra.