

# Willie Chalmers III

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## Education

### B.S. in Computer Science, The University of Texas at Dallas

August 2019 - May 2023 (expected), Richardson, TX

**Relevant coursework:** Discrete Mathematics for Computing, Data Structures and Introduction to Algorithmic Analysis, Advanced Algorithmic Design and Analysis, Probability and Statistics for Computer Science, Artificial Intelligence, Introduction to Machine Learning, Human Language Technologies, Intro to Deep Learning

## Experience

### Research Intern, The University of Texas at Dallas

September 2019 - December 2021

- Developing Polycraft AI Lab, a platform to train open-world reinforcement learning agents in Minecraft
- Analyzing and documenting user experience for reinforcement learning environments like OpenAI Gym
- Collaborating with faculty from Georgia Tech to build and evaluate utility of agent baselines

### Clark Research Scholar, The University of Texas at Dallas

June 2019 - August 2019

- Implemented a decision tree and perceptron from mathematical foundations
- Developed a convolutional neural network to detect relationships between objects in images, part of the Clark Summer Research Program, a competitive research program with ~50 accepted students

## Projects

### Very CLEVR, class project

March 2022 - present

- Creating tool to extract symbolic concepts from grounded visual data using the CLEVR dataset
- Creating data processing pipeline for images and text

### Jupiter, Nebula Labs

March 2022 - present

- Building a dashboard to allow hundreds of students to find events and organizations at UT Dallas
- Built using TypeScript, Next.js, MongoDB

### Nebula Planner, Nebula Labs

May 2020 - September 2021

- Lead team to create an open-source tool that helps students of all majors at UTD plan, organize, and visualize their coursework using a drag-and-drop interface
- Scraped data for 100+ courses from university catalog using Python HTML parsing libraries
- Designed and wireframes user experience by soliciting feedback from dozens of students

## Skills

**Languages:** Python, Kotlin, Java, R, C/C++, JavaScript, TypeScript, HTML, CSS

**Frameworks/Tools:** TensorFlow, Keras, NumPy, OpenAI Gym, React.js, Node.js, Docker, Google Cloud Platform

## Activities

### Nebula Labs, President

September 2022 - May 2022

Supervising a team of 30+ student software developers and UI/UX designers using agile methodologies to build tools for 1000+ students.

### Association for Computing Machinery, Member

September 2019 - present

Participated in a semester-long project development experience, served as a web developer and as a Director of Engineering for the largest student organization at UT Dallas, built a web portal for 300+ members, and incubated the Nebula Labs initiative.