

# Willie Chalmers III

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## Education

### Bachelor of Science in Computer Science

The University of Texas at Dallas

August 2023

Richardson, TX

## Work Experience

### Research Assistant

June 2022–April 2023

The University of Texas at Dallas (Intelligent Robotics and Vision Lab)

Richardson, TX

- Trained multimodal vision-language foundation models for downstream tasks in PyTorch
- Led creation of system to learn grounded concept representations using self-supervised learning
- Developed **data pipeline** to extract vector features from image datasets using Python
- Created visualizations to analyze structure of data in multimodal datasets using Matplotlib
- Evaluated performance of large language models at extracting concepts from natural language prompts

### Research Engineer Intern

September 2019–December 2021

The University of Texas at Dallas (Center for Engineering Innovation)

Richardson, TX

- Built and tested **Java-based tools** to train reinforcement learning AI agents in open-world 3D sandbox game
- Created **Python** scripts to benchmark and evaluate performance for reinforcement learning environments
- Developed architecture for AI agent to respond to novelty in open-world environments
- Used Git version control with branching workflows, resolving merge conflicts in team code repositories

## Activities and Leadership

### Founder | Nebula Labs

January 2021–May 2023

- Built and maintained applications for 500+ users to support university students' academic experiences
- **Drove direction for four products**, leading organization-wide town halls and weekly leadership meetings
- Established technical and design **documentation standards**, onboarding 30+ interdisciplinary team members
- Created high-fidelity mock-ups to communicate product ideas to team and **external stakeholders**
- Created and **containerized REST API** with 30,000+ records in MongoDB, deployed on Google Cloud Run (**GCP**)

### Head of Engineering | Association for Computing Machinery

April 2021–March 2022

- Provided technical leadership to two **cross-functional** engineering teams using agile development practices
- Deployed web-based **full-stack** event management service and user dashboard for third-largest university hackathon in the U.S., serving **750+ attendees and 900+ users**
- Redeveloped website's internal content management system and application portal for 1,000+ users, **collaborating with product designers** and internal media team to implement brand identity
- **Mitigated service downtime** after critical production deployment that coincided with 200+ new user sign-ups
- Maintained **cloud-based** identity and authorization solution for membership using Auth0

### Full-stack Developer | Association for Computing Machinery

January 2020–March 2021

- Rebuilt website and improved loading times for largest hackathon in North Texas with over 3,000 page views
- Wrote functions for microservice-based backend to automate routine functions in internal staff portal on AWS
- Organized month-long team-wide initiative to fix bugs in internal codebase and open source tools

## Skills

**Languages:** Python, Java, Kotlin, JavaScript, TypeScript, HTML, XML, JSON, CSS, SQL, GraphQL, C/C++

**Technologies:** React/Next.js, Redux, Node.js, Express.js, Flask, Django, PyTorch, TensorFlow, Pandas, NumPy

**Databases:** MongoDB, PostgreSQL, Cloud Firestore

**Other tools:** Git, Docker, Figma, Visual Studio Code