# Dylan Brose

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# EDUCATION

## University of Texas at Dallas

Richardson, TX

Bachelor of Science in Software Engineering

May 2026

## Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript/Typescript, HTML/CSS Frameworks: React, Node.js, PlatformIO, Django, OpenGL, MongoDB, Arduino Developer Tools: Git, Docker, VS Code, Visual Studio, IntelliJ, Android Studio

# Club Experience

# Software Project Manager

August 2024 - Present

Comet Robotics

Richardson, TX

- Coordinated a team of 15+ members to collaboratively develop a full-stack software infrastructure that communicated with 30+ wireless embedded systems using C++ in the Arduino framework
- Implemented a Node.JS backend that served a Vite+React webpage capable of supporting over 50 clients to participate in a real-time game event
- $\bullet$  Laid the project foundation, designed the tech stack, and delegated tasks effectively which led to an increase of productivity by 400% over the course of 18 months
- Launched an introductory course to drastically decrease onboarding time of new members and increase documentation initiatives

## Software Developer

August 2023 – August 2024

Comet Robotics

Richardson, TX

- Assisted a team in building a campus-wide club management system allowing 50+ officers and project managers to better manage member dues, attendance, reservations, and user statistics
- $\bullet$  Designed a Server-Side rendered portal for officers using PostgreSQL and Django to reduce time spent on operational tasks by 65%
- Optimized HTML and CSS to create an intuitive and responsive user interface used by more than 300 members

#### Projects

# CodebugGame Engine | Java, OpenGL, GLSL, Rust, Git

October 2024 – Present

- Developed a game engine in Java from the ground up to support rendering over 1 million assets with OpenGL and GLSL
- Collaborated with a team to integrate a custom Rust compiler into the engine, allowing users to execute custom scripts to define in-game creature behaviors

# RoboSCAD | Java, Git

January 2024

• Constructed a design infrastructure for 3D Modeling combat robots which utilized my custom Java UI and manual 3D graphics calculations for displaying 3D models

## 1lb Plastic Combat Robot | SolidWorks, 3D Printing

September 2023

- Iterated, constructed, and controlled a combat robot that went undefeated against over 80 competitors among 5 competitions
- Showcased mastery of planning, implementation, Solidworks, and 3D Printing

### MOGOS | Lua, Git

December 2022

- Modified a Lua terminal based computer operating system to be graphically interfaced
- Custom-made solutions include in-software asset creation, efficient image compression, and a full-suite graphics api
- Distributed among an in-game user base consisting of more than 200 weekly users

#### Interests

Video Games: Minecraft, Stellaris

Hobbies: Anime, Fiction Reading, Programming

Music: Metal/Rock, JPop