Zhihao Guo

E-mail: guodududu@gmail.com | **GitHub:** github.com/dududuguo

Career Objective

Motivated 4th-year Software Engineering student seeking a 12-week internship as an IT or Software Engineer. Skilled in programming, problem-solving using advanced algorithms and data structures, with expertise in Java web development, operating system kernels, and compilation principles.

Education

University of Technology Sydney (UTS) | 07/2021 – 11/2024 (expected)

- Bachelor of Software Engineering (Honor)
- GPA: 6.25/7 | WAM: 85/100

UTS Insearch / College | 10/2019 – 07/2021

- Diploma of Engineering
- GPA: 5.8/7

Publish

- Accelerating Learning with AI: Improving Students' Capability to Receive and Build Automated Feedback for Programming Courses (WEEF 2024)

Professional Experience

UTS Cacule Academic | 02/2023 - Present

- Assisting in programming courses and providing support to students

Software Engineer, PuraLink | Sydney, NSW | 08/2022 – 11/2022

- Full stack developer using Python Flask (Backend) and NodeJS, React (Frontend)
- Implemented MVC architecture for both frontend and backend
- Worked with SQL Server for database management

International Collegiate Programming Contest (ICPC) | 05/2022 – 10/2023

- UTS team member focusing on dynamic programming and greedy algorithms
- Served as a primary coder for the team

Programming Violence Behavior Detection Model | 08/2023 – 12/2023 (expected)

- Training large models for aggressive behavior detection
- Implementing human posture reshaping, behavior detection, and weapon detection
- Developing LSTM model to predict imminent aggressive behavior

Projects

Java Dynamic Exe-Graph | GitHub Repository

- Use in UTS Programming 2

Achievements and Certifications

- Dean's List, UTS 2024
- Engineering Undergraduate Achievement Prize, 2021 Spring
- Algorithmic Toolbox, University of California San Diego | Certificate
- Data Structures, University of California San Diego | Certificate

Technical Skills

Languages: C/C++, Java, Python, SQL, JavaScript
Frameworks/Libraries: Spring Boot/Cloud, Express, NodeJS, Flask, React
Cloud Services: AWS, Azure, AliYun
Databases: MySQL, MongoDB, SQL Server, PostgreSQL
Tools: VS Code, JetBrains IDEs, Visual Studio, Vim, Git, Docker
Operating Systems: Windows 11/10, MacOS, Linux (Ubuntu), WSL2

Debugging: SVF-tools, GDB, LLDB, KLEE, Pointer Analysis, Data-Flow Graph, Call Graph
Other: JVM, GNU, LLVM, Tomcat, Nginx, Z3 Constraint Solver, Multi-thread Development

Core Competencies

- Full-stack development with focus on high-concurrency environments
- Advanced data structures and algorithm optimization
- Agile project management and team collaboration
- Source code bug detection and repair