



TOBI DERUITER

Software and Robotics Engineer

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linkedin.com/in/tobi-deruiter ☆ Non-binary (they/them)

EDUCATION

	BS, Computer Science & Robotics Engineering Technology Purdue University GPA 3.5 / 4.0	07/2020 - 12/2024 West Lafayette, IN
	Semester Abroad University of New South Wales GPA 3.4 / 4.0	01/2023 - 05/2023 Sydney, Australia

EXPERIENCE

Computer Science Instructor Coding Mind Academy	07/2024 - Present West Lafayette, IN
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Coding Mind Academy is a coding institution which uses project-based learning to guide students in undertaking practical projects.

- Prepare curriculum for 1-3 middle to high school students both online and in person
- Instruct 2-5 classes weekly covering beginner to intermediate levels
- Teach courses in C++, Python, and Python: Pygame

Computer Science Intern The Rush Market	05/2022 - 08/2022 Omaha, NE
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The Rush Market is a startup company that allows customers to shop sustainably through furniture sourced from returns, overstocks, close-out sales, and more.

- Prototyped a web app on Heroku with Azure speech-to-text for improving inspection processes at Rush Market
- Created a back-end system using Twilio to alert employees of customer pick-ups via text messages
- Researched and contributed to the initial stages of developing computer vision for automating cycle counting and auditing

Application Developer Intern University of Nebraska at Omaha	05/2019 - 08/2019 Omaha, NE
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UNO hosts a summer high school internship program to give innovative, hands-on experience in university labs.

- Developed a mobile app for iOS and Android using Unity within a team of 2 interns and a graduate student
- Implemented operations and animations using C# programming language
- Utilized Unity Game Engine for project development

ACTIVITIES

Fluid Power Club (FPC) Purdue University	08/2023 - 05/2024
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FPC designs and manufactures a bike to compete in the NFPA Fluid Power Vehicle Challenge each year

- Designed and implemented an electronics system in a team of 4 to monitor and control the FPC bike
- Researched and tested 4+ sensors and 2 controllers while adhering to NFPA standards and requirements

Boiler Robotics Club (BRC) Purdue University	08/2021 - 12/2023
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BRC works to construct a Mars rover to compete in the University Rover Challenge (URC)

- Designed, built, and programmed a robotic arm in a team of 5 to 6 students (for retrieval and servicing in URC)
- Programmed in Python, utilizing ROS (Robot Operating System) for inverse kinematics; Solidworks used for design

SKILLS & COURSEWORK

Programming Languages

Python • Java • JavaScript • TypeScript • C • C++ • C# • HTML • CSS • Bash

Skills

3D Printing • Android • Autodesk • Azure • Computer Vision • Firebase • Heroku • Linux • Machine Learning • Raspberry Pi • Twilio • Unity • Visual Studio • NodeJS • Express • Frontend • Backend • Full Stack • Robotic Operating System • TensorFlow • CAD • Solidworks • Autodesk • MS Office • Teamwork • Communication • Problem Solving • Organization • Time Management • Public Speaking • Analysis • Strategic Thinking • Presentations

Coursework

Operating Systems • Software Testing • Intro to the Analysis of Algorithms • Software Engineering I • Systems Programming • Data Mining & Machine Learning • Computer Architecture • Programming in C • Continuous System Analysis and Design • Intro to Robot Kinematics • Instrumentation and Data Acquisition Design • Automated Manufacturing Processes • Introduction to Robotics • Manufacturing Systems • Production Design and Specification

PASSIONS

🥋 Muay Thai

🏔️ Climbing

🎮 Video games

🎸 Music

🐉 Dungeons & Dragons