ZACHARY TOBIAS DERUITER

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EDUCATION

BS, Computer Science: Software Engineering
Purdue University
01/2021 - 12/2024
West Lafayette, IN
GPA | **3.5** / 4.0

BS, Robotics Engineering Technology
Purdue University
07/2020 - 12/2024
West Lafayette, IN
GPA | **3.5** / 4.0

Semester Abroad
University of New South Wales
01/2023 - 05/2023
Sydney, Australia
GPA | **3.4** / 4.0

EXPERIENCE

Computer Science Instructor
Coding Mind Academy
07/2024 - Present
West Lafayette, IN

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

The Rush Market sources online furniture returns for sustainable resale in its online marketplace.
- 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

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

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

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

Skills

Python · Java · JavaScript · TypeScript · C · C++ · C# · HTML · CSS · Bash · 3D Printing · Android · Autodesk · Azure · Computer Vision · Firebase · Heroku · Linux · Machine Learning · Raspberry Pi · Twilio · Unity · Visual Studio · Node.JS · 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 · React

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