Chase Verbout

Software Engineer | Data Scientist | Graduate Student

Software Engineer and Data Scientist utilizing my 4+ years of experience to produce effective solutions for technological problems. I have programmed in C, C#, Java, JS, R, SQL and specialize in C++ and Python. I have also worked on a wide variety of project areas including API, cloud, database, robotics, web, and game development. My goal is to deliver efficient code that satisfies stakeholder requirements and upholds the organization's standard of quality.

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EDUCATION

MS Computer Science
Portland State University

01/2023 - Expected 2024 — *Portland, Oregon / Current GPA: 4.0*

Courses

- SOFTWARE ENGINEERING
- INTERNET, WEB, & CLOUD SYSTEMS
- REINFORCEMENT LEARNING
- ARTIFICIAL INTELLIGENCE
- ALGORITHM DESIGN & ANALYSIS
- COMPUTER GRAPHICS

Postbaccalaureate Computer Science Coursework
Portland State University

09/2021 - 12/2022 — *Portland, Oregon / Cumulative GPA: 4.0*

BA Geography: Data Science
University of Washington

09/2017 - 06/2021 — *Seattle, Washington / Cumulative GPA: 3.54*

WORK EXPERIENCE

In-Space Robotics, Modeling, and Simulation Intern
National Aeronautics and Space Administration (NASA)

05/2023 - 08/2023 — *Norfolk, Virginia*
Langley Research Center - Intern Security Clearance

Achievements/Tasks

- Worked with a 10-member team from the Robotics and Simulations branches on a project to demonstrate in-space autonomous modular assembly.
- Conducted research on project topics: physics, robotics, and field prevalent software.
- Achieved a more accurate dynamic simulation using Python and PyBullet to create methods for calculating and returning the combined mass matrix of the robotic system.
- Developed robotic system examples in Gazebo, then validated the physics and results of physics engines that have Python libraries.
- Transformed 3D model reference frames and part placement in Creo to establish an accurate subscale robot simulation scene for an internal progress demonstration.

Technical Course Support Specialist
PSU Computer Science Department

09/2022 - Expected 2024 — *Portland, Oregon*

Achievements/Tasks

- Operated undergrad course labs covering topics including control statements, arrays, pointers, objects, abstraction, and polymorphism as applied to data structures in C++.
- Tutored and guided classes of 20+ students to promote academic success and ensure an understanding of core computer science material.
- Graded and provided feedback on student programming assignments and algorithms to encourage improved code readability and functionality.

Open-Source Project Management Intern
King County Metro

05/2021 - 09/2021 — *Seattle, Washington*

Achievements/Tasks

- Collaborated on an open-source project (CommonPaths) to develop a centralized data collection and distribution system for pedestrian infrastructure.

SKILLS

AWS | Azure | C | C# / .NET | C++ | CSS | Docker | Gazebo / ROS2 | GCP | Git | GitHub | Google Doc | HTML | JS | Linux | Office | Python | R | SQL | Unity | VSCode / VS | Vim

PROJECTS

School - NASA API Showcase (03/2023 - 06/2023)
- Built a frontend application in Python and JS demonstrating API usage hosted using Docker and GCP.

Personal - Python Restful API (05/2023)
- Constructed a CRUD API in Python using Tornado, Redis, Postman, and MySQL.

School - Check The Fridge (01/2023 - 04/2023)
- Administered Agile based full stack project with a 4-member team performing initial project planning, scrums and sprints.
- Produced the project's backend architecture using .NET, C#, and Azure for a hosted server and MySQL database.

Personal - Portfolio Webpage (06/2022 - 08/2022)
- Created a personal portfolio webpage using Visual Studio Code, React, HTML, and CSS.

Personal - 2D Unity Minigame (08/2021 - 12/2021)
- Managed game development process with the Unity Game Engine and C# to produce a working product complete with imagery, sound, movement, and control.

PRESENTATIONS

Enhancing Dynamic Simulations with Mass Properties for In-Space Autonomous Robotic Systems (11/2023)
Oregon NASA Space Grant Consortium

INTERESTS

Machine Learning | Backend | Cloud | French | Full Stack | Game Dev | Hiking | Robotics | Space | Sports