Daniel Vu

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CERTIFICATIONS, SKILLS

- **Languages:** Python, Java, Javascript, SQL, C, C++, C#, Ocaml, Assembly
- **Software Tools:** Git, Docker, Jira, React
- **Technical Skills:** Object-Oriented Design, Agile/Scrum, SOLID Design Principles, Design Patterns, Algorithms and Data Structures, Prioritization Methods (MoSCoW), EARS Requirement Style, Gherkin Tests
- **Soft Skills:** Communication, Critical Thinking, Attention to Detail, Project Management, Adaptability, Problem Solving, Team Collaboration
- **Certifications: TestOut PC Pro Certification (6-1C6-NH5VR):** Tested through simulations and exams for installing, repairing, configuring, and securing computer hardware/software, and operating systems in home/corporate environments.

Technical Projects

- **Software Engineering Tools/Utilities**
  - Developed a Python code generator for cybersecurity applications, improving code validation by 20%
  - Created Java-based account management systems to process and secure sensitive user data.
- **Drone Delivery Sim**, Backend Developer   hub.docker.com/repository/docker/vud1394/drone_sim
  - Developed a drone delivery simulation in an agile environment, utilizing Jira for sprint planning, task tracking, and team collaboration.
  - Incorporated features like recharge stations, a battery management system, and data collection.
  - Engineered backend pathfinding in C++ and integrated 3D assets while implementing frontend functionality in TypeScript.
  - Designed system architecture with UML, employing design patterns (decorator, singleton, factory) to ensure scalability and maintainability.
  - Leveraged Git for version control and Docker for containerization, facilitating efficient deployment and consistent development environments.
- **Robotic Projects**
  - Assembled and programmed robots using different gear systems for movement and task execution.
  - Engaged in collaboration to brainstorm ideas, prototype designs, and troubleshoot technical issues.
  - Acquired practical skills in gear ratios, torque calculations, and motion control principles increasing robot task efficiency by 25%.
  - Demonstrated adaptability and problem-solving abilities in overcoming project challenges.

WORK EXPERIENCE

Tech Academy   **Apr 2024 –Present**
Stem Teaching Assistant   *Little Canada, MN*
- Prepared computer science course materials, guiding students in robotics and virtual reality coding projects.
- Coached students in assembling robots and troubleshooting technical issues, improving their understanding of robotics by 70%.
- Led workshops that introduced 100+ students to virtual reality development, resulting in a 90% project completion rate.

EDUCATION

University of Minnesota Twin-Cities,   **September 2023 - May 2026**
College of Science and Engineering   *Minneapolis, MN*
BS Computer Science, Minor: Management: Dean's List (Fall 2023), Presidential Scholarship Recipient
- Relevant Coursework: Algorithms and Data Structures, Advanced Programming Principles, Machine Architecture and Org, Computing and Programming Concepts, Program Design & Development