

EDUCATION

University of Arizona

- Bachelor Of Science Systems Engineering with Minor in Software Engineering
- Cumulative GPA: 3.4 / 4.0

Graduated
December 2023

SKILLS

- Python, Java, C++, SQL, Agile (Scrum), Object-Orientated Programming, UML, and Object-Oriented Design.
- Machine Learning, STRIDE, Visual Studio Code, Agile, MATLAB, Microsoft Excel, Word, PowerPoint, and ICS.

PROJECTS

Water Predictive Analysis Software Program (Senior Capstone) - Python

- Built a predictive analysis system for the Bard Water District to increase their efficiency by at least 5%. Utilized systems engineering practices to acquire and weigh various input factors and utilized machine learning to refine the process over time.
- Collaborated with farmers, scientists, ditch riders, and water district engineering manager to define requirements and developed a system design using UML.
- Designed and implemented an algorithm as a key team member, significantly enhancing water distribution efficiency from 77% to 90% accuracy.

Software Engineering Scholarship Application Management System – Java

- Developed front-end/back-end application for scholarship users using java in a team of 5 members.
- Analyzed documentation provided by stakeholder to develop proper software requirements specification.
- Utilized Java Swing to create multiple user interfaces and GIT for real-time collaboration with team members.

Shopping Cart Security - C++

- Collaborated with team members to ensure seamless project delivery and effective communication, leading to timely project completion.
- Improved software security by identifying and mitigating potential risks associated with the shopping cart program.
- Implemented vulnerability exploitation tests to evaluate the effectiveness of security measures in mitigating identified threats, employing practical approaches to assess real-world risks.

Automated Coin Sorter Machine C++

- Led a team of 4 in designing and developing a cost-effective coin sorting machine using 3D printing, providing a user-friendly solution for coin collectors and enthusiasts.
- Successfully implemented infrared reflective sensors for accurate coin detection and engineered the system to register coins and display them to the user through an LCD display.
- Ensured compliance with specified system states and capability requirements, conducting extensive testing to guarantee the reliability and accuracy of the coin sorting machine.

Cloud Rental Airbnb System – UML

- Designed and developed the CloudRental system using object-oriented design principles and UML diagrams with Enterprise Architect software.
- Focused on creating an efficient property owner administration platform, enabling users to list rental properties in the cloud and manage property information seamlessly.
- Specified functional and nonfunctional requirements, including performance, safety, security, and software quality attributes, to guide system development and evaluation.

EMPLOYMENT

Bard Water District/ Winterhaven, CA

Canal Gate Automatization Intern Paid

March-April 2023

- Revolutionized water management in arid zones through the implementation of cyber-physical systems, aiming to enhance water efficiency and reduce reliance on manual labor, especially ditch riders.
- Automated and upgraded canal gate operations, integrating LD, HMI, and Code-based Historian technologies to significantly improve overall efficiency.
- Completed signal tests to optimize radio connectivity, utilizing safety protocols and equipment in accordance with NIOSH standards.

Next One/Mexicali, BC, Mexico

Car Wash Operations Supervisor

May 2016-December 2020

- Led market research, negotiated with suppliers, and implemented cost-effective solutions to optimize operational efficiency.
- Applied advanced analytical skills for judicious decision-making in equipment procurement, resulting in heightened effectiveness and cost-efficiency about 5000/year.
- Supervised and mentored over 30 employees, emphasizing attention to detail and meeting customer expectations for a highly proficient workforce.