

Ronnie Delos Santos

Third-year computer science major at the University of Portland. I'm passionate about machine learning and software engineering. Hello 🙌🙌

PEER-REVIEWED CONFERENCE PAPERS:

Martin Cenek, **Ronnie Delos Santos**. Teaching and Using AI in the Classroom: Integrating AI Modules in Undergraduate Computer Science Education. *In Proceedings of The 2025 "International Conference on the AI Revolution: Research, Ethics, and Society (AIR-RES'25)"*.

EXPERIENCE:

University of Portland, Portland OR — CS 341 Teaching Assistant

January 2025 - Present

Providing support to both students and the professor in coursework and technical discussions.

University of Portland, Portland OR — CS Undergraduate Research Assistant

September 2024 - Present

Co-authored a peer-reviewed paper accepted at the International Conference on the AI Revolution: Research, Ethics, and Society (AIR-RES 2025)

Supporting two capstone teams in designing and implementing technical solutions while concurrently conducting independent research.

TypeScript/JavaScript, Node.js, Next.js, React, PostgreSQL, Linux, C/C++, IoT, Arduino/embedded, Raspberry Pi, Kubernetes

University of Portland, Portland OR — CS 376 Teaching Assistant

August 2024 - December 2024

Created and self-hosted a wargame (inspired by OverTheWire) and an accompanying lab for Unix/Linux skill development, engaging 30+ students through 20 progressively challenging bespoke levels. Automated deployment with bash scripting and maintained secure, isolated environments to ensure fair play and foster practical problem-solving skill development.

Automating the grading process using nbgrader and integrating NLP techniques for handling complex free-response questions, streamlining grading workflows, and ensuring quick, consistent feedback while reducing instructor workload.

Managing the administration of Linux environments within JupyterHub, including user configuration, system security, and technical troubleshooting, ensuring a reliable computational environment without technical distractions for both students and the professor.

Updating and restructuring lab materials into interactive Jupyter Notebooks, improving student engagement and simplifying the understanding of complex Unix/Linux concepts. Ensuring labs are finalized and delivered on a weekly basis for the entire class.

Assisting students during lab sessions, guiding them in Unix/Linux system administration and shell scripting.

Nbgrader, JupyterHub, Python, Unix/Linux, Bash

University of Portland, Portland OR — CS Summer Undergraduate Research Assistant

May 2024 - August 2024

Conducted independent research on the application of nbgrader and JupyterHub in academic settings, teaching myself these tools and taking full ownership of re-engineering the technical infrastructure for the CS 376 Unix/Linux course.

Educated the course professor on how to use nbgrader, providing detailed guidance on how it integrates with JupyterHub.

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<https://rin.dev>

YEARS OF SOFTWARE XP:

TypeScript (3+)

JavaScript (4+)

HTML/CSS (4+)

React.js (3+)

git (4+)

Node.js (4+)

Docker (1+)

Kubernetes (1)

Ansible (1)

PostgreSQL (2+)

SQL (2+)

C/C++ (2+)

Unit Testing (1)

E2E Testing (1)

EDUCATION:

Wasilla High School

University of Anchorage
Alaska

Mat-Su CNA Nurse Aide

Certificate Program

University of Portland

pursuing B.S.C.S.

LICENSE & CERTIFICATION:

Alaska CNA License 185056

Basic Life Support

Certification

REFERENCES:

Jeff Parrish, 10+ years
software engineering
(mentor)

Angie Thursby, RN (mentor)

Martin Cenek, PhD

(undergraduate advisor)

AWARDS:

2024 Gilman Scholar

2021 AP Scholar with Honor

Successfully advocated for the adoption of JupyterHub as the core system for managing labs and led its implementation. This provided students with pre-configured, standardized computing environments, eliminating inconsistencies between local setups and resolving common issues where software worked on one machine but not on another.

Nbgrader, JupyterHub, Python, Unix/Linux

EXTRACURRICULARS:

Skateboarding

Journaling

University of Portland, Portland OR — *Malawi Engineering Capstone*

January 2024 - June 2024

Architecting and deploying end-to-end tested full-stack academic recordkeeping systems for secondary schools and borehole catalog systems for the country of Malawi.

Collaborated with Malawi government officials and educators from St. Mary's Secondary School and the University of Mzuzu to gather feedback and iteratively improve projects, focusing on user-centric design and addressing real-world challenges faced by educational institutions.

Delivered a talk to 50 students at St. Mary's Secondary School on the significance and application of computer science, motivating them to pursue technology-driven careers.

Participated in workshops and training sessions to educate community members and students on scholarship and grant writing, fostering long-term educational opportunities.

TypeScript/JavaScript, Node.js, Next.js, React, Linux, Ansible, Docker, Kubernetes, PostgreSQL, Vitest, Cypress, Tailscale

University of Portland, Portland OR — *CS Undergraduate Research Assistant*

September 2023 - May 2024

Developed IoT solutions for water irrigation monitoring in Malawi, Africa, utilizing embedded systems and low-power communication protocols to improve agricultural efficiency. Designed and implemented firmware for Arduino and Raspberry Pi devices, ensuring reliable data collection and communication via I2C, SPI, and LoRa protocols.

C/C++, IoT, Arduino/embedded, Raspberry Pi, protocols (I2C, SPI, LoRa), SSH

Mat-Su CNA Training Program LLC, Palmer AK — *Front-End Developer*

June 2022 - August 2022

Collaborated with clients to gather requirements and input for a new company website design, ensuring that the final product met business objectives and user needs. Created responsive and accessible web interfaces using TypeScript, TailwindCSS, and Next.js, delivering a visually appealing and user-friendly experience.

Next.js, TypeScript/JavaScript, React

Maple Springs of Palmer, Palmer AK — *Certified Nursing Assistant*

September 2021 - July 2022

Assisted patients with activities of daily living and supported nurses in the care of residents, ensuring a high standard of patient care and comfort. Accurately measured and documented patient vital signs, contributing to effective medical care and monitoring.

Caring Hands Assisted Living Facility, Wasilla AK — *Caregiver*

August 2021

Assisted elderly and disabled patients with daily living activities, including personal care, transportation, and companionship, promoting their well-being and comfort.

Forking Software LLC, Remote — *Programmer*

August 2021 - December 2021 (Contract)

Delivered freelance technical writing and programming consultation services, producing clear and informative documentation for diverse software projects.

McDonalds/MRD Inc., Wasilla AK — *Crew Member*

July 2020 - March 2021

Greeted customers, operated kitchen equipment, and maintained cleanliness, ensuring a positive dining experience for patrons. Managed cash register operations, promoting special deals and efficiently processing customer orders.

