

Ryan Nelson

Software Engineer

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Prospective Software Engineer with 10+ years of programming experience. Able to design, create, analyze, and implement clean code in a professional and productive manner. Contributed to complex software systems in both academic and personal settings.

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PROJECTS

Neural Network/Generational Mutator and Trainer

- Developed a unique functional neural network model in Python
- Created a system in which neural networks will undergo generations of training and mutations
- Built a simple racetrack mini-game in PyGame to test and improve training

Large Language Models in Serverless Functions

- Joined a project run by two PhD computer science students
- Helped initialize research for decreasing the start-time for deploying large language models

Full Stack Website Development

- Taken both an online Harvard website development class and in-person UCSC classes
- Published a professional website using React and Github Pages
- Collaborated on a flash card web page using React and NeonDB allowing users to create, edit, share, and play flash card sets
- Developed an email management web page using React and PostgreSQL allowing easy access to a user's email tools

Unity 3D Engine Projects

- Developed multiple games ranging from proof-of-concept mechanics to published works

EXPERIENCE

GPT/ML/NLP Team Lead - Tech4Good Lab - Santa Cruz, CA (September 2023 - present)

- Joined a campus lab dedicated to utilizing technology to improve learning capabilities
- Collaborated with team members to improve initiation tasks for the GPT/ML/NLP team
- Took a leadership position on the team, working together with lab leadership to improve tasks and exercises

Surf Camp Counselor - AquaSurf School - Manhattan Beach, CA (June 2022 - August 2022)

- Coached kids ages 7-13 on their surfing abilities
- Operated within a productive team to manage the daily operations of camp
- Cultivated a positive and fun atmosphere

Reader/Grader for CSE 103 - UCSC CSE Department - remote (April 2022 - June 2022)

- Conducted the grading of student weekly homework submissions

Online Private Instructor - internalDrive Tech - remote (May 2021 - September 2021)

- Tutored students ages 8-15 on computer science subjects
- Prepared online one-on-one lesson materials for students to learn
- Taught Python programming, Unity/C# development, and Minecraft game design

SKILLS

Python, JavaScript, Java, C, C++, C#, React, Kotlin, Swift, React Native, Node, Express, HTML5, CSS, Unity Engine, Angular
PyTorch, NeonDB, PostgreSQL, MongoDB, WebGL, Pandas, NumPy, LangChain, PicoCTF, CryptoHack
Problem-Solving, Troubleshooting, Hard-working, Positive, Cooperative, Work Well Under Pressure, Agile

RELEVANT COURSEWORK

Software Engineering | Artificial Intelligence | Computer Security | Full Stack Web Development | Mobile Applications
Computer Graphics | Computer Systems | Compiler Design | Concurrent and Parallel Programming
Computer Architecture | Analysis of Algorithms | Data Structures and Algorithms | Programming Languages

EDUCATION

University of California, Santa Cruz (2020-2024)
Computer Science (Bachelors of Science) and Statistics (Minor)
3.9 Overall GPA