Patrick Rodriguez

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https://github.com/patrick-rodriguez

Education

University of Oregon — Eugene, Oregon
BSc in Computer Science — Sep 2019 – Dec 2023

Technical Skills

Programming — Python • C • C++ • C# • Linux • Bash • x86-64 Assembly • MySQL

Tools — Microsoft Office • Adobe • MatLab • Arduino

Courses — Operating Systems • Artificial Intelligence • Data Structures and Algorithms • Computer Organization • Object-Oriented Programming • Discrete Math • Linear Algebra • Calculus

Personal Projects

Plant Environment Optimizer — Apr 2023 – June 2023
- Wrote code in the Arduino language that formats data sent from the microcontroller and sensors to the serial communication port.
- Created a Python program that utilizes the Arduino Nano microcontroller with BME280 and Grove environmental sensors to help plant owners with environmental monitoring and visualizing characteristics responsible for plant growth such as ambient temperature and humidity and soil moisture.
- Used Dash web framework and Tkinter GUI library to provide users a simple interface that's easy to comprehend alongside a MySQL database to hold key information about each plant.

EasyA — Jan 2023 – Feb 2023
- Led a team of peers to create software which graphs letter grade distributions among professors at the University of Oregon
- Used a dedicated MySQL server to store and fetch necessary data and BeautifulSoup python library to filter faculty members from instructors scraped from University of Oregon department and faculty websites.
- Practiced software engineering techniques such as creating deliverable documentation in the software requirements and design phase prior to implementation. Created static and dynamic diagrams which visualize the behavior of the system.

Nature's Bling Printer Automation — June 2022 – Aug 2022
- Created a program which automates the creation of a Microsoft word document containing the name of stones and their metaphysical description. The document is then printed to the default printer.
- Facilitated the need for a 600+ unsorted Microsoft word document containing the stone names and descriptions to a simple excel sheet that is sorted alphabetically within the program.
- Utilized several python APIs such as Tkinter for the user interface and pandas for easier use of data manipulation.

Employment

Data Analyst
University of Cincinnati @ Cincinnati, Ohio — June 2023 – Current
- Contributed to OpenSD, a Python software committed to enhancing research on spreading depressions which is a neurological phenomenon characterized by periods of decreased brain activity.
- Discussed with supervisor on how to implement several functions that use patient data to calculate metrics to further understand how certain factors influence the characteristics of a spreading depression.
- Created batch mode, a module that re-calculates metrics from previously annotated spreading depressions within a MySQL database using different parameters.

Repair Technician
Cellairis @ Eugene, Oregon — Oct 2021 – June 2022
- Familiarized myself with Apple, Samsung, and Motorola cellular hardware and their functions.
- Performed system diagnostics on mobile phones. Conducted system functional testing and record failures in database.
- Removed, fixed, and replaced components such as OLED screens, batteries, and charging ports.

Store Manager
Nature's Bling @ Bend, Oregon — Apr 2018 - Current
- Became with the square register interface to sort inventory of hundreds of items and facilitate transactions.
- Learned and provided history and physical and metaphysical properties of rocks, gems, and fossils to customers.
- Created programs to facilitate and automate several jobs.

Additional Information

Professional Development
- iOS Development Club @ University of Oregon

Languages

- English
- French