

# Patrick E. Nisperos

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## Experience

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### ASIC Characterization Junior Engineer

Jun 2022 – Jan 2023

*Micron Technology*

*San Jose, CA*

- Contributed to the characterization process by developing automation code for testing analog devices and high-speed transceiver blocks with large data collection to save at least 50% of test time.
- Developed scalable, maintainable, efficient, documented programs that led to at least a 30% increase in productivity.
- Evaluated IP from external vendors and altered for compatibility with characterization laboratory and APIs.
- Technologies used: Red Hat Linux, C++, VBA, Matlab, Visual Studio, Sublime Text, Jira, function generator, oscilloscope, digital multimeter, dc power supply

### Autonomous Vehicle Program Intern/STEM Student Assistant

Oct 2021 – May 2022

*Sacramento Municipal Utility District*

*Sacramento, CA*

- Helped build the foundation of this annual robotics program as one of the first interns and produced documentation.
- Educated 15 students utilizing MIT's Beaver Works Lab on how to program with autonomous remote-control vehicles.
- Met with Autonomous Vehicle Program team weekly collaborating successes/failures and to improve existing structure.
- Technologies used: NumPy, Matplotlib, OpenCV, Ipywidgets, Racecar\_core, Jupyter Notebook, VSCode, color and depth camera, LIDAR.

### Package Handler

Sep 2019 – Aug 2021

*United Parcel Service*

*Lathrop, CA*

- Coordinated packages to their precise destinations at a rate of 590 PPH (top 10%).
- Became Air-Certified to handle packages that travel on aircraft towards 30 or more destinations.
- Constantly communicated with team members of 10 or more to handle packages optimally in a fast-paced environment.

## Projects

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### Song Surf | *HTML/CSS, JavaScript, Python, SQLite, Flask, Last.fm REST API, Git, GitHub*

Jan 2023 – Present

- Full Stack website that allows users to discover new music they'll love through an informative and intuitive website.
- Contributing to 60% of the backend (recommendation algorithms and database), along with 20% of frontend functionality.
- Performing standups 3-4 times a month, adding new requests from feedback.

### Register Automation Tool | *C++, Header-Only libraries, Git, Bitbucket, Win/Unix*

Jun 2022 – Oct 2022

- Automates lengthy process of manually creating and processing 1000+ register mnemonic, address, fields, and values that are apart of SoC system architecture.
- Worked on back-end and front-end. Presented to engineering team of 8, fulfilled many new requests/features to be added.
- Improved at least a 70% increase in efficiency for register data by reducing manual processing and human-error.

### PC Hardware Builder/Tutorial | *Python, PyQt5, Agile (Scrum), Git, GitHub*

Mar 2022 – May 2022

- Deployed deliverables 2 times a month for testing/feedback from customer to improve user experience.
- Developed a functional, informative, fun to use GUI for the user to learn about PC hardware and building.
- Contributed to all 3 of the modes which include: build mode, disassemble mode, and quiz mode.

## Skills

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**Languages:** C/C++, Java, Python, Visual Basic, Microsoft SQL Server, R, Matlab

**Web Development:** HTML, CSS, JavaScript, Flask

**Developer Tools:** Git, VMWare, Visual Studio, Eclipse, VS Code, Sublime

**Computer:** Linux, Terminal, Bash, PowerShell, Word/Excel/PowerPoint, Windows

## Education

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### University of the Pacific

Stockton, CA

*Bachelor of Science in Computer Science, GPA: 3.77*

May 2023

*Relevant coursework:*

Software Engineering, Application Development, Data Structures, Design and Analysis of Algorithms, Programming Languages, Parallel Computing, Computer Systems and Networks, Database Management Systems, Operating Systems