Nicholas Fantino-Dyer, BS

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Summary

Project Manager with a Bachelor's in Computer Science and pursuing a Master's degree. Possesses over one year of experience in managing migration projects, conducting research, testing, troubleshooting, and providing IT support. Experienced in developing mobile games using Unity and C#, deploying applications to the Google Play Store, and implementing custom instructions on a MIPS pipelined datapath. Proficient in analyzing performance metrics, automating data collection, and evaluating the energy efficiency of Linux and Windows systems. Familiar with integrating Cloudflare Workers with Grafana and managing project timelines. Collaborative team player committed to delivering reliable software solutions.

Education

Masters of Science in Computer Science, Santa Clara University, Santa Clara, CA, 2025
Bachelor of Science in Computer Science, University of the Pacific, Stockton, CA, 2024

Project Experience

Mobile Game Development
May 2024 - July 2024

- Developed Gunslinger in Unity (C#) in which the player shoots a gun down a linear path and picks up upgrades. It is now live on the Google Play Store.
- Set a timeline for myself to make sure I am working on the project efficiently and within a certain timeframe (2 months).
- Shared a weekly prototype with peers to showcase my progress.

Machine Learning Project
January 2024 - May 2024

- Developed a maze simulation in Unity (C#) in which a Q-Learning model and an Evolutionary model compete to learn the optimal route to the end.
- Used the A* algorithm which allows the user to see an optimal route that the models could take to reach the end.
- Received first place in Senior Capstone Project.

Oak Meadow Dental Center Project
September 2020 - June 2022

- Automated repetitive data input, saving staff 30 minutes daily.
- Screen scraper program to simulate a human getting and inputting data.
- Streamlined project using Python for efficiency.

Linux vs Windows Energy Efficiency Analysis Research Paper
September 2024 - December 2024

- Analyzed energy efficiency of Linux and Windows under various workloads using Intel PCM and Python.
- Identified and investigated anomalies in PCM data, including negative energy values, CPU utilization over 100%, and mismatched rows.
- Validated data consistency through correlation analysis, multi-run comparisons, and cross-verification with external tools like lm-sensors and stress-ng.
- Visualized findings with heatmaps, regression models, and scatter plots, demonstrating Linux's superior energy efficiency.

Cloudflare Worker Automation Project
September 2024 - October 2024

- Integrated Cloudflare Workers with Grafana to fetch real time data and visualize it for performance monitoring and troubleshooting.
- Automated data collection and processing pipelines for power metrics and water tank data, improving operational efficiency and insights.
- Developed a script to dynamically generate and refresh API keys when the current key expired or became invalid, ensuring uninterrupted system functionality.

CPU Datapath Implementing a New Instruction
November 2024 - December 2024

- Designed and implemented a custom instruction within a MIPS-based CPU architecture to count the number of times a specific value does not appear in an array.
- Created the CPU datapath, incorporating specialized hardware blocks such as the CNE (count not equal) Unit, MUXes, and XOR units to handle the new instruction.
- Analyzed performance metrics, including CPU time and CPI, validating the effectiveness of the custom instruction in enhancing CPU functionality.

Work Experience

Project Manager / ERP Developer
Pacific Technology, Stockton, CA
April 2023 - December 2023

- Orchestrated migration from Ellucian Banner 8 to Banner 9.
- Documented existing pages, ensuring seamless transition.
- Created a model to migrate COBOL scripts to SQL and increased efficiency by 25%.
- Led research, testing, and troubleshooting.

Dental Assistant and Receptionist
Oak Meadow Dental Center, Los Gatos, CA
Seasonal June 2016 - December 2024

- Provided IT support for the office and helped by updated computers/software, and communicated with technical support with ways to solve issues.
- Assisted doctors/hygienists by setting up and cleaning the operatories and assisting during the procedures.
- Trained new employees on office policies and procedures including new COVID-19 procedures, sterilizing instruments, scanning documents, emailing patients, and other receptionist duties as well as dental assistant duties.

Technical Skills: Java, Javascript, Python, C/C++, C#, SQL, Linux, UML Design, Cloudflare Workers, Grafana, Android Studio
Skills: Cloud Platforms & Services, Automation, Backup & Data Recovery, Virtualization & Containerization, Parallelizing, Testing, Debugging

- **Relevant Courses Taken:** Software Development, Databases, Data Structures, Programming Languages, Web Applications, Computer Systems & Networks, Operating Systems, Parallel Computing, Computer Architecture

Links

Github: https://github.com/nfantinodyer
LinkedIn: https://www.linkedin.com/in/nicholas-fantino-dyer-753868215/
Portfolio: https://nfantinodyer.github.io/portfolioWebsite/