Piero F. Orderique

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Education

Massachusetts Institute of Technology
SB Computer Science | Expected: May 2024
GPA: 4.7/5.0

→ 6.100/6.101 Programming Course: Lab Assistant
→ MIT CSAIL: Software Design Researcher
→ Computational Linear Algebra: Grader
→ Sigma Nu: Technology Chair
→ Club Peru: President
→ GTL Italy: Machine Learning & Web Dev Lecturer
→ Society of Hispanic Professional Engineers

Relevant Coursework
Computer Vision, Design & Analysis of Algorithms, Systems Engineering, Software Construction, AI, Software Studio, Machine Learning, Embedded Systems, Web Lab, Physics EM, Graphics, Technical Communication

Projects

OurSpace > Full Stack Website
12/2022 Designed, developed, and debugged a crowdsourcing solution to service requests for communities using Vue.js, MongoDB, and Bootstrap

AI Smart Rockets > Genetic Simulation
03/2022 Developed a genetic algorithm with customizable parameters to create path finding rockets around user-made obstacles

Maze Solver, TicTacToe, Checkers, Pool > Games
02/2022 Polished graphics and implemented the minimax algorithm to optimally play games like tic-tac-toe against adversarial human players (JS)

PixelTrader > Full Stack Website
01/2022 Deployed artistic trading web app on Heroku using React (JS/TS), an express backend with a MongoDB database, and a Google Auth. login system

Instagram & Twitter Bots > Web Scrapers / API
12/2021 Designed an Instagram and Twitter API using Python web scraping for an automated email notification service

COVID-19 ML Cases Predictor > Data Visuals
07/2020 Generated several predictive plots based on state and county cases using scikit-learn ML models

Paint Canvas > Android App
06/2020 Published a drawing app (Java) for kids utilizing object-oriented design with a minimalistic

Work Experience

STEP Intern — 06/2022 - 08/2022
Google
→ Performed a full stack refactoring (Java, TS) to support a more efficient protocol buffer & message caching system
→ Created design docs and educational tech presentations
→ Wrote autocomplete components (Angular), reducing number of invalid options shown to user from ~98% to 0%
→ Organized a bug-bash session; fixed 20+ bugs
→ Increased several component's code coverage by >15%
→ Audited internal tools to meet accessibility standards

Machine Learning Researcher — 01/2022
Microsoft
→ Researched several ML model architectures for Intune
→ Proposed a detailed architectural design for review
→ Pre-processed and cleaned client data for training
→ Trained, tuned, and evaluated a classification model with 97% accuracy on Azure ML Studio
→ Deployed model as a web service (API) for internal use

Robotics Software Intern — 06/2021 - 08/2021
NVIDIA
→ Optimized ROS2 packages to run faster on NVIDIA hardware using internal APIs rather than OpenCV (C++)
→ Reinforced project stability by writing multiple unit and integration tests and benchmarking scripts (Python)
→ Diagnosed and solved synchronization issues using time policy algorithms hidden in the implementation file (C++)
→ Performed many code reviews and project doc. updates

Climate Fellow & Researcher — 09/2020 - 05/2021
MIT Office of Sustainability
→ Research helped identify a potential $600M+ worth of damage to university property from flooding simulations
→ Designed a Python package for reading/visualizing 300+ specialized data files using SciPy, matplotlib, and OOD
→ Filtered geodata storage by 99.99% (1.1TB to 1MB)

Skills

Programming
TypeScript, JavaScript, C++, Python, Java, SQL, Kusto, Julia, R, HTML/CSS, Assembly

Software & Tools
Angular, Azure ML, Bootstrap, Confluence, Docker, Excel, Flask, Git, GitHub/GitLab, Google Auth, Pandas, React, jQuery, MongoDB, NumPy, OpenCV, PyTorch, React, ROS2, Scikit-Learn, Selenium, Socket IO, Vercel, Vue, Unix

Distinction

→ Gates Scholar
→ President's Volunteer Service Award
→ HSF Scholar, Stamps Scholar, Foundation Fellow