

Piero F. Orderique

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🌐 www.pforderique.com in /pforderique

Education

Massachusetts Institute of Technology

SB Computer Science | *Expected: May 2024*

GPA: 4.7/5.0

Society of Hispanic Professional Engineers, MIT Office of Sustainability Team, Sigma Nu Publicity Chair, MAES Vice President of Social Affairs, MBA, AI@MIT

Relevant Coursework:

Intermediate Algorithms & DS, Discrete Math, Physics EM, Technical Communication, Intro to Embedded Systems, Design Thinking, Lin. Alg. and Optimization

Columbus High School

Top 1%; Rank: 3 | 08/2016 - 05/2020

President: National Math Honor Society & Spanish Club
Vice Pres: Student Council | Captain: Swim Team

GPA: 4.723/4.0 | ACT: 35 | 16 AP Courses
400+ hours of community service and tutoring

Projects (see more at www.pforderique.com)

Instagram & Twitter Bots -- Automation

12/2021 Designed an Instagram and Twitter API using Python web scraping for an automated email notification service

AI Tic Tac Toe -- Game

08/2021 Developed an adversarial tic-tac-toe player using the minimax algorithm (JS) and used an FSM to keep track of game states

AirChat -- Messaging Web-App

06/2021 Deployed a chatting application on Heroku (switched from AWS EB) using a Flask backend, socket.io (JS) and PostgreSQL

Path Finder -- Visual Simulation

01/2021 Wrote a 2D simulation (JS) using the BFS algorithm to find paths around user-made obstacles

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 Wrote code (Java) to publish a drawing app that can store width, color, and patterns using a kid-friendly UI

Work Experience

Software Design Engineer

01/2022 - present

Microsoft

- Researched several ML models to improve Intune services
- Proposed a detailed architectural design for team review
- Pre-processed and cleaned client data for training
- Trained, tuned, and compared two classification models on Azure ML Studio using standard performance metrics
- Deployed model as a web service for internal use

Robotics Software Intern

06/2021 - 08/2021

NVIDIA

- Optimized standard 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 several code reviews and project doc. updates

Software Engineer

09/2020 - 05/2021

MIT Office of Sustainability

- Research helped identify a potential \$600M+ worth of damage to university property from flooding simulations
- Created custom functions (VBA) to enhance scalability
- Cut processing time in half by querying large datasets (SQL)
- Designed a Python package for reading and visualizing 300+ specialized data files using SciPy, matplotlib, and OOD
- Reduced space storage by 99.99% (from 1.1TB to ~1MB) by filtering large global datasets on a remote Linux cluster

Project Associate

11/2017 - 08/2020

Borinquen Foods

- Built an Arduino security and notification system
- Quadrupled the restaurant's Google reviews and increased market reach by creating Spanish advertisements on Canva
- Digitized checking accounts using Excel

Skills/Certificates

Programming

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

Software & Tools

ArcGIS, Azure ML, Confluence, Docker, Excel, Flask, Git, GitHub/GitLab, Google Auth, JIRA, jQuery, MongoDB, NumPy, OpenCV, React, ROS2, Selenium, Socket IO, Ubuntu Linux

Certificates & Learning

LinkedIn: PyTorch Essentials, OpenCV, AI Foundations
Esri: GIS Basics, 3D Visualization, SQL Querying Data
IBM/Microsoft: Machine Learning with Python, Intro to C++

Distinctions

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