Carlos Lopez

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EDUCATION

Boston University   Boston, MA
Bachelor of Science in Computer Science and Physics   *Sept. 2019 – May 2022*
HSF Scholar, Upsilon Pi Epsilon Member

TECHNICAL SKILLS

Languages: Solidity, Python, Javascript, Java, C/C++, Rust, Golang, SQL, HTML/CSS, Ocaml, Lua, Fortran
Frameworks: React, Next.js, Tailwind, Node.js, Bootstrap, jQuery, Flask, Django
Python Modules: Pandas, NumPy, Matplotlib, Pillow, OpenCV, Pytorch, Selenium, PyAutoGUI
Tools: Git, Docker, Firebase, VS Code, Jupyter Notebook, Ghidra, Linux, AWS, Unity, Redis, Kali, Metasploit

EXPERIENCE

Teacher Assistant for Information Security   January 2022 – May 2022
Boston University   *Boston, MA*
- Held weekly labs graded papers, and answered homework and course questions through Piazza
- Helped students understand attacks, protocols, and their vulnerabilities like MITM, CSRF, BGP, and ARP

Computer Assistant/Programmer   2019 – Present
Boston University IS&T Service Desk   *Boston, MA*
- Troubleshooted, maintained, and solved the issues affecting the technology of the BU community and its facilities
- Kept track of daily phone, in-person, and email client interactions through the ServiceNow ticketing system
- Managed admin groups and research software, along with its licensing and renewal

Data Scientist   August 2020 – May 2021
Blinkah   *Boston, MA*
- Built GPS software to detect pedestrians, ongoing traffic, and neighboring car lanes with machine learning and OpenCV in Python by communicating and working alongside 8 students for enhanced car safety ratings.
- Filtered out images with a vanishing point and used image multiplication along with Hough transform to isolate lanes for continuous lane detection, adding additional lanes to the system for enhancing detection rates by 66%

PROJECTS

Crypto Alerts | *Discord.js, Ethers.js, SQL, Stripe*
- Made an ethers listener that detected whenever a new cryptocurrency was made in the Binance Blockhain
- Made a Discord Bot and Discord Server that would alert subscribers whenever a new cryptocurrency was created
- Used Upgrade.Chat and Stripe to host a store where over 70 users subscribed to receive more frequent updates

Crypto Markowitz Website | *Bootstrap, Flask, Pandas, CoinGecko API, HTML/CSS*
- Made website that allows anyone to provide a list of cryptocurrencies and in return get the suggested optimal investment distribution according to Markowitz Portfolio Optimization Theory
- Used Flask for Backend, Pandas and Numpy for manipulating crypto price data, Scipy for optimization and minimization of loss, and Matplotlib for making the interactive graphs served to the user

Nutri-Snap | *Tensorflow, React Native, Git*
- React Native app that uses Tensorflow to recognize food items from camera and returns their nutritional values
- Won first place out of 56 teams at remote hackathon and was done in collaboration with three other teammates

Interpreter | *Ocaml*
- Made an interpreter in Ocaml supporting functions, custom syntax, loops, and conditionals in order to apply functional programming and learn grammatical parsing and lexing

NOTEWORTHY CLASSES TAKEN

Algorithm Analysis, Data Structures, Quantum Computing, Distributed Systems, Network Security, Malware Hunting and Reverse Engineering, Functional Programming, Methods for Quantitative Finance, Statistical Thermodynamics