Alberto Roca

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https://github.com/AlbertoRoca96

(434)315-4194

Farmville, Virginia

**Education**

Bachelor of Science in Computer Science Jan 2022 – May 2025

Longwood University (Farmville, Virginia) GPA: 3.19

– Inducted into the Upsilon Pi Epsilon Computer Science Honor Society

**Side Projects**

**Pointkedex (Project)** 2025 – Present

– Built an **ML**-powered web app (PWA) that identifies Pokémon, with offline caching via a service worker and web app manifest; published a “model v3” release and deployed inference to a **Hugging Face Space**. (https://github.com/AlbertoRoca96/pointkedex)

**Scraping & Checks Scheduler** 2025 – Present

– Automated “headless Playwright on a cron” that runs in GitHub Actions, scrapes sources, diffs changes, emits JSON/time-series, and publishes a GitHub Pages dashboard; 1.5k+ commits and structured repo (`src/`, `docs/`, `.github/workflows/`).

**https://github.com/AlbertoRoca96/scraping-checks-scheduler**

**Retail Inventory Tracker** 2025 – Present

– Phone-first field audit app built with **Expo** (**React Native**) and **Supabase** (**Auth/Postgres/Storage/RLS**); CI uses EAS builds via GitHub Actions; ~390 commits. ; optimized memory usage for real-time collaborative systems in c++.; developed high-performance client-side systems using c++ and python.

**https://github.com/AlbertoRoca96/retail-inventory-tracker**

**Cryptocurrency Volatility Index — CVI** 2025 – Present

– JS/Python pipeline that fetches market/derivatives data, computes CVI and supporting indicators, and publishes a Pages dashboard; MIT-licensed repo with `scripts/`, `docs/`, and `.github/workflows/`; ~420 commits.

**https://github.com/AlbertoRoca96/Cryptocurrency-Volatility-Index-CVI**

**Pokedex** 2024 – 2025

– Real-time desktop Pokédex: captures a screen region with OpenCV, preprocesses frames, and runs a fine-tuned ResNet-50 for top-1 classification; triggers TTS to speak flavor text on demand. **https://github.com/AlbertoRoca96/Pokedex** — profiled hotspots and reduced latency/memory in C++ paths.

**Work Experience**

**Concierge, Centra Southside Community Hospital** (Farmville, VA) Aug 2021 – Present

– Greeted and assisted patients and visitors, ensuring a welcoming environment

– Resolved problems, registered patients, provided wayfinding support

**Technical Support Representative, Shentel** (Lynchburg, VA) Jul 2018 – Sept 2018

– Diagnosed and repaired software and hardware issues (Windows and Macintosh)

**Office Assistant, Optimize Engineering** (Farmville, VA) Sept 2014 – Jul 2017

– Used AutoCAD for basic drafting and 3D modeling of engineering plans

**Technical Skills  
C/C++ (3 years), Python (including PyTorch) (3 years), JavaScript (3 years), Java (3 years), HTML/CSS (3 years), Bison/Flex (2 year), Linux (3 years), Microsoft Windows (15 years), Adobe (15 years), Microsoft Office (15 years), AutoCAD (15 years), PowerBI (5 years), TypeScript (3 years), SQL (PostgreSQL/PLpgSQL) (3 years)** **, React Native (3 years)**

**Workshops**

Workshop I — Internet of Things (Arduino) June 2025

– Hands-on Arduino sensors/actuators; wrote C/C++ sketches using pinMode, digitalRead/analogRead and Serial, plus a quick intro to IoT connectivity.

Workshop II — Making Python Fast with C Bindings - Vibe Coding / Agentic AI Jul 2025

– Built Python C extensions (CPython API/Cython/cffi) and live-demoed vibe coding/agentic AI with Copilot-style multi-step prompting, tool use, and human-in-the-loop guardrails.

**References**

Dr. Robert Marmorstein, Professor of Computer Science, Longwood University,

(434)395-2185, marmorsteinrm@longwood.edu

Dr. Don Blaheta, Associate Professor of Computer Science, Longwood University,

(434)395-2191, blahetadp@longwood.edu

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