Jerry Catron

Annapolis, MD • 410-310-3189 • jcatron3@protonmail.com

Education

University of Maryland ■ **B.S. Computer Science & Mathematics** ▪ May 2022 Expected Graduation

- **GPA: 3.53/4.0**

Relevant Coursework: Object-Oriented Programming I & II, Algorithms, Data Structures, Programming Language Paradigms, Calculus I & II & III, Advanced Calculus, Probability Theory, Linear Algebra, Advanced Applications of Linear Algebra, Differential Equations, Applied Probability & Statistics, Intro to Computer Systems, Data Science

Technical Skills

Programming Languages: Java, Python, JavaScript
Frameworks/Libraries: React, Next.js, Node.js, Express, Pandas, TensorFlow, Sci-kit Learn, Apache Spark
Tools/Technologies: AWS, Jenkins, Terraform, Docker, Mongodb, SQL, JUnit, GitHub, HTML, CSS, Databricks

Professional Experience

Travelers ■ Remote ▪ June 2021 — Present
Software Engineer Intern

- Creating a Databricks Job Orchestration System using Python scripts to coordinate Apache Spark jobs with AWS EC2, CloudWatch, Step Function, Lambda Function, S3, DynamoDB, and SNS services. This will automate many ETL processes, reducing working time from ~5 days to ~4 hours.
- Using Apache Spark distributed systems and PySpark SQL queries to process and validate policy data (~10 million rows) stored in S3 Data Lake.
- Developing a CI/CD pipeline to deploy application code, as well as build infrastructure as code using Jenkins, GitHub, and Terraform.

Kratos Space & Missile Defense Systems ■ Hanover, Maryland ▪ Mar 2019 — Sept 2019
Engineering Intern

- Wrote signal-processing scripts using Python's pandas, numPy, and matplotlib libraries extensively. These scripts extracted multiple csv files (~60k rows) of flight data from ARAV-B launch vehicle and transformed them into a single DataFrame to present to Flight Engineers for further analysis.
- Created a formula reverse engineering the full-time equivalence (FTE) of subcontractors. Deduced my company was overpaying for labor. Created rich visualizations to present to leadership. Program Director cut labor costs by $23 million USD in newest proposal because of my analysis.

Extracurriculars

WMUC Radio Station ▪ November 2020 — February 2021
Full Stack Web-Developer

- Collaborated with a team of UMD students to prototype a website for the school's radio station using modern technologies such as React, Ghost CMS, Express, and Node.js

Goldman Sachs ▪ September 2020
Engineering Virtual Program

- Participated in a single day educational program on Cybersecurity best practices.

JP Morgan & Chase Co. ▪ September 2020
Software Engineering Virtual Experience

- Participated in a single day educational program teaching attendees the basics of the React library, as well as setting up a Python API to pull stock quote data.

Projects

Personal Website ▪ *jcatron.com*

- Developed a personal website using Next.js and deployed with Vercel. Connected with Spotify and Apple HealthKit APIs. Achieved Google Lighthouse score of 100 for all categories.

Deep Learning - Bitcoin Price Prediction ▪ *jcatron3.github.io/bitcoin_lstm/*

- Performed data extraction, exploratory analysis, and cleaning using Pandas and sci-kit learn. Then trained TensorFlow's LSTM model to forecast the cryptocurrency Bitcoin's price 5 minute into the future.

Leadership Experience

Hero Boys Run Club ■ Stevensville, Maryland ▪ Mar 2017 — May 2019
Head Coach

- Organized an after-school program for twenty 3rd-5th grade boys. Provided leadership and motivation to kids with no running experience, enabling them to complete a 5km race within 2 months.
- Brought in local pillars of the community (Sheriff, Fire Chief, Veterans, Business Owners) to teach the boys the importance of strong moral values.