



Aaditya Chopra

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Technical Skills

Languages: Python, C, C++, TypeScript, JavaScript, ReactJs, HTML/CSS, SQL

Coursework: Machine Learning, Data Structures and Algorithms, Object Oriented Programming (OOPs), Database Management, Operating Systems

Education

University of Washington

M.S. in Data Science

Seattle, WA, USA

Sep 2024 – Mar 2026

Thapar Institute of Engineering and Technology

B.E. in Computer Science

Patiala, India

Jul 2017 – Jun 2021

Experience

JP Morgan Chase & Co.

Quantitative Research Associate

Bengaluru, India

Jan 2024 – Aug 2024

Quantitative Research Analyst

Jul 2021 – Dec 2023

- Enhanced the Data Quality Program (DQP), **reducing \$150M** in market risk capital by streamlining infrastructure.
- Developed a statistical performance monitoring and visualization tool for DQP using **Python, React, and TypeScript**, ensuring precise and reliable time series data for VaR calculations.
- Created a Python-based automated outlier detection system handling **150,000+ time series** daily, producing detailed reports pinpointing statistical anomalies.
- Collaborated with cross-functional teams to optimize essential computational functions, resulting in a **57% reduction** in downstream process runtime.
- Crafted advanced regulatory reporting automation for **Fed** and **PRA**, reducing manual effort from **20 hr** to **few mins**.
- Built a robust cross-vendor framework for calculating Average Daily Traded Volume across asset classes, used by the firm's **Credit Officers** to approve trades and the liquidity add-on calculation.
- Worked on multiple time series data models, proactively addressing and resolving model-related issues.
- Provided mentorship and facilitated seamless onboarding for new team members.

JP Morgan Chase & Co.

Quantitative Research Intern

Mumbai, India

Jan 2021 – Jun 2021

- Automated monitoring and reporting of time series issues by sending daily automated emails using Python and SMTP, and making web apps using React and TypeScript.
- Intercommunication of the aforementioned reports across the firm **saves at least 80% of everyone's time** daily.

United Health Group (Optum)

Software Development Engineer Intern

Hyderabad, India

Jun 2020 – Jul 2020

- Applied **CNNs** and segmentation techniques for medical image analysis, improving diagnostics and treatment planning.
- Used various classifiers to classify skin lesions within dermatology images.

Projects

Centralized Intelligent Surveillance System | *Python, OpenCV, Keras*

Apr 2020

- Developed a real-time suspicious activity detection system, automating alerts to relevant authorities for prompt response in cases of accidents, explosions, and more.
- Achieved a **low false positive rate of 1.7%** and a **false negative rate of 0.8%** on the training dataset.

Sketch To Website | *Python, Tensorflow, HTML, CSS*

Oct 2019

- Used image captioning techniques to get all the elements in the image in a simple code format. Converted it to properly indented and comprehensive HTML/CSS code using my own algorithm.
- Works with **92% accuracy** and provides a web page with source code in **less than 3 seconds**.

Real-Time Heart Rate Measurement from Smart Phone Camera | *Python, OpenCV*

Jan 2019

- Detected subtle variations in the intensity of light reflected from the face.
- Processed the input and plotted the heart rate graph with **93.8% accuracy**.

Achievements/Extra Curricular

- Placed among the top **100 out of 20k+** participants in multiple coding competitions hosted by CodeChef, demonstrating strong algorithmic and coding skills.
- Runner-up** in college in **ACM-ICPC** 2018 and 2019.
- Instructor** at ACM Student Chapter. Delivered lectures on competitive programming and software development best practices to a cohort of **80+ students**.