# NATHAN DIXON

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### **EDUCATION**

The George Washington University, School of Engineering & Applied Science

Washington, DC

Computer Science, Bachelor of Science (Major), Management and Leadership (Minor)

Graduating 2026

Relevant Coursework: Software Engineering., System Programming, Data Structures & Algorithms, Databases, OS

The Hong Kong University of Science & Technology, School of Engineering

**Hong Kong** 

Study Abroad Program

January - May 2025

### LEADERSHIP AND RESEARCH EXPERIENCE

**SEAS SUPER Fellow,** *Lead Researcher* 

George Washington University, May - September 2024, June 2025 - Present

- Worked with Dr. Kartik Bulusu on creating a lightweight, cost effective data collection and analysis system using Raspberry Pis and an NVIDIA Jetson to investigate benefits of self-hosted machine learning.
- Set up and managed Docker containers on an NVIDIA Jetson running MQTT for lightweight IoT communication, a Grafana dashboard, and a PostgreSQL database.
- Led a team of graduate and undergraduate students delegated tasks, facilitated weekly meetings, reported to PI.

NLP Research, Research Assistant

George Washington University, September 2024 - December 2024

- Worked with Dr. Kinga Dobolyi on identifying banter-like parts of speech from AO3 novels and social media comments
- Created a 15k point dataset of dialogue pairs, compared results of banter identification by Llama 3.1 and BERT

Palantir Spring Launch Program, Launcher

Palantir, March 2024

- Created an interactive dashboard with a team that allows world leaders and scientists to make data driven decisions about potential disease threats and vaccine distribution using Palantir Foundry.
- Networked with current Palantir Devs, Deltas, and Echos to learn more about Palantir life and work.

**Association for Computing Machinery,** *President, Treasurer* 

George Washington University, April 2023 - Present

- Led a driven team to begin hosting regular Hackathons to expand our presence in the CS community
- Created two new positions on the board to manage outreach to the student body and the department

#### **WORK EXPERIENCE**

Greater Washington Partnership, Technology Intern

Washington, DC, June 2025 - Present

- Conducted research on Partnership website mapped onsite and offsite links, investigated vulnerabilities
- Wrote 5 page memo on recommendations for website improvement with an estimated 1.2s saved per page when loading
- Designed dynamic, low-code wireframes and facilitated meetings with multiple departments to plan the website refresh Kaliwa. Host. Expo Washington, DC, June 2024 - August 2024
- Managed reservations and waitlist, sat 200 400 guests per night
- Trained 4 new employees in the hospitality industry to accompany and welcome diverse groups of guests

Dexter Southfield Science & Technology Camp, Technology Instructor

Brookline, MA. June - August 2022, 2023

Taught 8-12-year-olds electronic skills such as soldering and circuitry, coding in Scratch and Python, and 3D CAD

# **PROJECTS**

**Collage:** A social platform built for personalized course planning and AI academic advising

- Implemented backend data persistence logic using SQL for the activity page, ensuring proper storage and retrieval of user activities
- Optimized frontend performance through precaching in Next.js based on my activity importance ranking algorithm
- Collaborated effectively in a hybrid team environment to deliver the update on time

Forex Trading Indicator: An algorithm based indicator that predicts and simulates trades on the forex market

- Implemented using Pandas, Keras, scikit-learn, and Matplotlib, trained on data from Oanda FX API
- A KNN model gives popular price indicators an accuracy score based on how well it predicts price movement
- Trades are simulated based on outputs from each indicator and the likelihood of verifiability of the given indicator

Caviar Connect: A social media app designed for making parties more virtually interactive

- Built in Swift with a Firebase backend, Caviar allows the user to connect to an event by scanning a QR code
- Users can add and upvote songs to be played by the DJ
- Users can add social media links to their profile to find others at the event

# **TECHNICAL SKILLS & CERTIFICATIONS**

Awards: Milton Academy Head of School Award (2022), SUPER Fellowship (2024, 2025), SURE Award (2025)

Skills: Java, Python, Javascript, Unity, Linux, Git, Kubernetes, Docker, TensorFlow, MQTT, DigitalOcean, PostgreSQL

**Interests:** Photography, Motorsport, Ultimate Frisbee