Matthew Chin

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Experience

Colexia Remote + New York, NY | June 2025 - August 2025

Development Intern

- Developed product indexing + script algorithm for item sorting and organization to extract clean datasets
- Contributed to backend application services using Python+beautifulsoup4
- Started development on waitlist website and structure for app using FireBase

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Digital Media Engagement Lab, UMD College Park, MD | February 2025 - Present

Undergraduate Researcher - Data Visualization Team

- Contributed to an Undergraduate Research team focused on analyzing Digital Media Interaction data to explore engagement metrics, interaction patterns, and attention data.
- Co-Developed a live news web scraper app and a Chrome Extension to scrape and visualize metadata from local journalism platforms such as the *Baltimore Banner*.
- Engineered live data visualizations using **JavaScript**, **Chart.js**, **Next.js** and **TypeScript**.

Stone Rehabilitation and Senior Living Newton, MA | August 2020 - May 2023

IT Technician & Receptionist

- Executed data entry for patient records into a database, ensuring efficiency of indexing and data integrity.
- Assisted in updating and troubleshooting systems, software and related hardware within healthcare systems.

Projects

VFC Community App (React Native, FireBase, TypeScript)

- Contributed to cross-platform mobile/web app using **React Native** and **Expo**, and **Firebase** to serve 250+ members
- Implemented event management, push notifications, and multi factor user authentication
- Created reusable library components and custom hooks to decrease duplication and increase efficiency by 40%

Pseudo Random Number Generation Lab - SEED Labs, Ubuntu VM 20.4

- Explored weaknesses of pseudo random number generation methods within Cryptography, highlighting real world problems within Ubuntu Virtual Machine 20.4 environment.
- Implemented key-generation algorithms, using insecure methods to develop attack recognition and recover encryption keys exploiting program predictability.
- Conducted experiments comparing /dev/random and /dev/urandom, evaluating blocking and entropy sources vs. non blocking behaviors, also applying statistical tools to assess pseudo-random number quality and secure key generation.

Baltimore Banner Scraper (JavaScript, HTML, CSS)

- Co-Engineered a Chrome Extension using JS, HTML, CSS, and **Chart.js** to scrape and plot key article metrics and metadata (word count, date, images, headers) from the *Baltimore Banner*, a local news website.
- Leveraged Chrome Extensions API (**Manifest v3)**, **Web Storage**, **DOM Parsing**, and content scripts for real-time data extraction/restructuring, and UI rendering.

Education

University of Maryland, College Park *College Park, MD 20742*

Bachelors of Science, **Computer Science** *Class of 2027*

Coursework: *OOP I/II* (CMSC131/132), Discrete Structures (CMSC250), *Computer Systems* (CMSC216), Applied Statistics (STAT400), *Algorithms* (CMSC351), *Organization of Programming Languages* (CMSC330), *Cryptography* (CMSC456), *Computer Networks* (CMSC417)

Certifications & Skills

Languages: Java, C, Python**,** OCaml**,** Rust

- Developing Machine Learning Solutions (AWS, *Coursera)*
- Tata - Cybersecurity Analyst Job Simulation (Aug. 2025)
- Mastercard - Cybersecurity Job Simulation (Aug. 2025)
- JPMorgan Software Engineering Job Simulation (In-Progress)
- Seal of Biliteracy (Spanish + English, 2022)