

# Dylan Farrell

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## EDUCATION

### Rutgers University

*B.S. in Computer Science*

New Brunswick, NJ

Sep. 2020 - May 2024

- Relevant Coursework: Algorithms, Intro to Artificial Intelligence, Intro to Data Science, Principles of Information and Data Management, Software Methodology, Discrete Structures, Data Structures, Physics 1 & 2

## EXPERIENCE

### Software Engineer Fellow

*HeadStarter AI*

July 2024 – Sep. 2024

New York

- Developed Munch Mates, a Flutter-based mobile application integrated with Firebase, implementing custom authentication, Yelp API integration, and real-time location services. Features a swipe-based interface for restaurant discovery, user preference management, and social features like shared restaurant viewing sessions.
- Built and deployed 5 AI projects in 5 weeks using React.js, Next.js, Firebase, following agile methodologies with weekly sprints.
- Participate in weekly sessions with engineers from Google, Y Combinator, Stanford, Amazon and venture-backed startups.

### Research Extern

*Rutgers MBS*

June 2023 – Aug. 2023

New Brunswick, NJ

- Researched ways to identify and mitigate evolving cybersecurity threats to Maritime IoT devices, focusing on innovative solutions like the Zero Trust Model.
- Conducted an in-depth analysis of past cyber-attacks on the maritime industry, assessing their impact on operations, finances, and safety.
- Implemented risk assessment models to evaluate potential vulnerabilities and proposed solutions to enhance security measures for maritime operations.

## PROJECTS

### Clipstation.io | *Next.js, Typescript, NoSQL*

Fall 2024

- Developed a Video editing platform web app and chrome extension that allows users to get longer form content, transform, and post short form content.
- Integrated Cloudinary's video processing API to handle complex transformations including aspect ratio changes, background effects, and captions, reducing manual editing time significantly.
- Implemented Firebase authentication and real-time database for user management and video progress tracking, supporting concurrent processing of multiple video transformations.

### Streaming App | *Java, XML, SQLite, Android Studio*

Summer 2024

- Created an IPTV streaming application featuring secure user authentication, favorite channels for sub-users, streaming channels, and searching across all categories.
- Engineered custom fetchers and parsers to process M3U playlist data for live TV channels, movies, and TV shows, and integrated RecyclerView with custom adapters.
- Optimized the app to ensure compatibility with Google TV, Amazon Fire TV, and various Android TV devices.

### Face and Digit Classification | *Python, Machine Learning, Neural Networks*

Spring 2024

- Constructed a convolutional neural network using a ReLU activation function and L2 regularization to classify handwritten digits and detect faces.
- Attained classification accuracies of 83.8% for digit classification and 92% for face classification.
- Enhanced performance through feature development based on raw pixel data and quadrant-based features for digit images.

## TECHNICAL SKILLS

**Languages:** Java, Python, C, JavaScript, HTML, JSON

**Frameworks:** React, Next.js, Node.js, Django, JUnit

**Developer Tools:** Git, AWS, Google Cloud Platform, Visual Studio, IntelliJ, Eclipse, Android Studio

**Libraries:** Pandas, NumPy, Matplotlib, Pygame