

Matthew Szypula

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EDUCATION AND HONORS

Colgate University | Hamilton, NY

May 2026

Bachelor of Arts, Double Major in Computer Science and Economics

- Computer Science GPA: 3.96/4.00
- Dean's Award with Distinction for Academic Excellence (Fall 2022, Spring 2023, Fall 2023)
- Member of Colgate Coders, Colgate Trading Society, Phi Eta Sigma National Honor Society
- Relevant Coursework: Data Structures & Algorithms, Computer Systems, Intro to Computer Science I (Python), Intro to Computer Science II (Java), Discrete Structures, Issues in Contemporary CS, Calculus II

Half Hollow Hills West | Dix Hills, NY

June 2022

- GPA: 4.00/4.00, Graduated in top 20 students
- Most Outstanding Scholar Athlete Award, Triple A Award for top student in arts, athletics and academics

TECHNICAL SKILLS

Languages: Java, Python, C++, C, JavaScript, SQL, HTML5/CSS, Kotlin, ARM Assembly

Technologies & Tools: React, AWS Resources, MongoDB, Git/Github, Google Cloud, Visual Studio Code, Linux

EXPERIENCE

Ferocious Media | *Software Engineer Intern* | Remote

June 2023 - Present

- Proposed, designed, and engineered a full-stack CRM to streamline the client onboarding process using JavaScript and Node.js APIs for secure MongoDB storage and JWT authentication. Developed a responsive React.js frontend with Redux, utilizing AWS S3 and Google Drive for file storage and delivery. Integrated Slack for client-specific channels and ClickUp for task assignments. Deployed with Docker for scalability
- Created an email subscription service through AWS Lambda, AWS DynamoDB and AWS Step Functions to provide statistics for the review data of Google Local Service Ad competitors to Ferocious Media clients, allowing for quantifiable review goals to increase ad ranking
- Constructed custom mapping/data analysis software using the Google Maps API and Folium library to visualize the zip codes where national franchise clients are running ads in order to avoid targeting overlap
- Developed an AI transcription tool to analyze phone calls from ads and derive lead attribution metrics

Department of Computer Science | *Teaching Assistant* | Colgate University

Aug 2023 - Present

- Guide over 30 students in mastering data structures and Object-Oriented Programming in Java and Python
- Establish and explain coding best practices, debugging techniques, and efficient algorithm design

Ferocious Media | *Digital Coordinator* | Bayshore, NY

June 2020 - July 2022

- Produced and managed social media graphics alongside programmatic banner ads for over 200 Ferocious Media clients, enhancing engagement and click-through rate by 40% with visually compelling content

PERSONAL PROJECTS

AI Underwriting Web App | *Java, JavaScript, Python, React*

- Built a web application to analyze insurance forms for businesses, life insurance, and investment banking, assessing risk for underwriting using OCR and creating an API to process documents and user authentication
- Accurately displayed insurance form questions with associated risk percentages, total risk, and policy recommendations in addition to the AI confidence level

Algorithmic Stock Trading Bot | *Python, Java, C++*

- Designed and deployed a quantitative stock trading system using advanced momentum models and machine learning algorithms through TensorFlow, resulting in a high-frequency and low-latency trading strategy
- Integrated and back tested the system with the Alpaca API for real-time trading, optimizing trade profitability

Excel/Google Sheets AI Formula Generator Chrome Extension & Web App | *HTML/CSS, JavaScript, Python*

- Developed an AI-powered Chrome extension for Excel/Google Sheets that translates natural language into spreadsheet formulas, using Flask for the AI backend, Stripe for payment and Firebase/Firestore for user login
- Featured by Google, with over 900 active users, demonstrating significant user adoption and impact

Android AI Chat App | *Java, Kotlin, XML, SQL*

- Built an app to interface with several AI language models, including ChatGPT, to allow users to easily have conversations with them or use preset prompts, managing conversations in a SQL database

NCAA DIVISION I ATHLETICS

Varsity Men's Swimming & Diving | *Community Service Chair* | Colgate University

Fall 2022 - Present

- Dedicate over 20 hours per week to practice, competition, travel, conditioning, and individual training within a nationally ranked program, demonstrating exceptional commitment and time management
- Holder of multiple school records, won the 2024 Ironman award for outstanding dedication and commitment