

# Michael Swan

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## EDUCATION

### University of Connecticut

Bachelor of Science in Computer Science

Storrs, CT

May 2025

- **Concentration:** Software Development
- **GPA:** 3.73 (Spring 2023)
- **Honors:** Dean's List: Fall 2021, Spring 2023, Alpha Lambda Delta Honor Society

## PROJECT EXPERIENCE

### MarketChat – Personal Project

Summer 2023

- Developed and launched "MarketChat" using the **MERN** stack, a financial web platform hosted on **Netlify** and **Heroku**, featuring a dynamic stock graph with data sourced from **AlphaVantage APIs**
- Leveraged **OpenAI's API** to integrate a GPT-powered chatbot, allowing users to ask complex financial questions and receive informed answers in real-time
- Enhanced search efficiency by **90%** by transitioning from real-time API calls to direct queries on a **MongoDB** database, complemented by a daily CRON job to ensure search result data remains current

### Portfolio – Personal Project

Summer 2023

- Designed and built a responsive personal portfolio using **HTML**, **CSS**, and **JavaScript**
- Implemented a contact form using a **Netlify** serverless function with instant submission notifications

### Global Temperatures – University of Connecticut

Fall 2022

- Engineered a hash mapping solution in **Python** using object-oriented design, enabling O(1) time complexity for entries and modifications while maintaining O(n) memory consumption
- Focused on test-driven development by writing unit tests and refining code until all tests succeeded
- Collaborated with a group of students leveraging an Agile strategy to successfully meet deadlines

## RELEVANT COURSEWORK

Introduction to Computing for Engineers

Calculus I, II, & Multivariable

Introduction to Principles of Programming

Introduction to Discrete Systems

Data Structures & Object-Oriented Design

Introduction to Computer Architecture

Algorithms and Complexity

Systems Programming

## WORK EXPERIENCE

### Teaching Assistant for Computer Architecture

Storrs, CT

University of Connecticut

August 2023 – Present

- Lead weekly lab sections, providing hands-on instruction and guidance to over 20 students, ensuring comprehension and practical application of core concepts
- Conduct weekly office hours for over 150 students to address student questions, providing targeted assistance and improving overall class performance
- Collaborate with faculty to evaluate student assignments using designated rubrics, ensuring accurate and consistent grading

### Merchandise Associate

Enfield, CT

Marshall's

June 2021 – November 2021

- Delivered exceptional customer service, resulting in increased loyalty and credit program participation

### Front Gate Team Member

Agawam, MA

Six Flags New England

June 2019 – March 2020

- Managed ticket sales and entry processing for guests, maintaining high service standards

## SKILLS

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

**Technologies:** React, Node.js, Express, MongoDB, Styled-Components

**Developer Tools:** Git, VS Code, npm