



# MICHAEL J. BOCELLI

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## EDUCATION

### University of Delaware, College of Engineering

Newark, DE

*Bachelor of Science in Computer Science* (GPA 3.98, Dean's List: Fall 2020 – Fall 2023)

Expected May 2024

- President of the Game Design & Development club with ~150 members
- Outstanding Junior Award 2023 recipient in the department of computer and information sciences
- Dr. Marion Wiley Memorial Award 2023 recipient for excellency in the study of German as a non-major

### Universität Leipzig, Study Abroad

Leipzig, Germany

*interDaF e.V. am Herder-Institut der Universität Leipzig*

Jan. 2023

## PROJECTS

### Portfolio Site (TypeScript, React, Next.js)

June 2023 – Curr.

Portfolio site utilizing the React library and GitHub API

- Leveraging Next.js static site generation to optimize client load times and SEO results
- Writing re-usable HTML components with React to create a responsive site layout
- Interfacing with the GitHub API to display my open-source repositories in an accessible manner

### HoloFlash (Python, JavaScript, Flask, React, Google Cloud, MongoDB Atlas, Unity)

March 2024

Full-stack application using machine learning models to turn lecture notes and recordings into flashcards

- Implemented a Flask backend to interface with models on a Google Cloud Debian virtual machine instance
- Won the HenHacks 2024 hackathon Major League Hacking "Best Use of AI in Education" category

### Matey (JavaScript, Firebase, Express.js, Node.js, Next.js)

Sept. 2023 – Dec. 2023

A full-stack, easy-to-use, web app for managing shared household tasks with roommates

- Designed and wrote a RESTful API by coding 20 endpoints to allow client to interface with Node.js server
- Implemented server-side authentication via Express.js middleware and Firebase JWT token verification

### Boids Simulation (C-Sharp, Unity)

Aug. 2022

A 3D implementation of the Boids Algorithm, performed by crows in Unity

- Simulated the flocking of crows by implementing Craig Reynolds's algorithm with a third dimension
- Experimented with perching behavior to achieve more realistic results

## EXPERIENCE

### University of Delaware CISC Department

Newark, DE

Teaching Assistant: Introduction to Software Engineering (TypeScript, React)

Aug. 2023 – Curr.

- Assisting in the teaching of agile software development practices along with React frontend development
- Conducting lab sessions to teach fundamental software development skills
- Holding four office hours per week to answer students' questions

Teaching Assistant: General Computer Science for Engineers (Python)

Aug. 2022 – Dec. 2022

- Guided/mentored a cohort of 15 students through learning the fundamentals of computer science
- Held hour long office hours twice a week to assist students outside the classroom
- Graded assignments within 7 days of submission

## SKILLS

**Tools:** React, Next.js, Node.js, Express.js, Flask, SvelteKit, Git, Firebase, Bash, Docker, Mongo DB, Unity, Blender

**Languages:** TypeScript, JavaScript, CPP, Python, C-Sharp, C, SQL, Common Lisp, HTML, CSS, Java

**Communication:** B2 Upper-intermediate proficiency of reading, speaking, and writing German | Customer service