

Tomer Aberbach

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Education

The College of New Jersey (TCNJ)

Fall 2016 to Fall 2019

BS Computer Science and Mathematics Minor

- **Cumulative GPA:** 3.93/4.0
- **Dean's List:** 6/6 Semesters
- **Memberships:** UPE Honor Society, Golden Key Honor Society (Top 15% of College and University Upperclassmen)
- **Relevant Courses:** Data Structures, Algorithms, Database Systems, Web Design, Advanced Browser Technologies, Computer Architecture, Operating Systems, Data Science, Cryptography, Linear Algebra, Discrete Structures, Statistics, Linguistics

Employment

Google

May to Aug. 2019

Full Stack Web Developer

Java, JavaScript, HTML, CSS, Closure Templates

- Worked on the Google Sites team to develop a feedback feature for ensuring sites remain current.
- Built a fully asynchronous backend with *Java* and a modular frontend with a component-based *JavaScript* framework.
- Internationalized the existing email infrastructure by implementing proper text alignment for right-to-left languages.

Mercer Street Friends

Jan. to Feb. 2019

Full Stack Web Developer

Ruby, PostgreSQL, HTML, SCSS | Rails, SendGrid

- Implemented a novel MVC full stack web application with *Ruby on Rails* and *PostgreSQL* for the Trenton-based non-profit organization, Mercer Street Friends, to effectively publicize the positive impacts of its charitable work.
- Applied the principles of responsive web design to provide a pleasant user experience on desktop, tablet, and mobile devices.

The College of New Jersey (TCNJ)

June to July 2017

Mentored Undergraduate Student Experience (MUSE) Researcher

Java, Python | Weka, SVM^{Light}, LIBSVM, scikit-learn, SLURM

- Collaborated with a student in a selective 8-week full-time undergraduate research program.
- Developed an automated machine learning curve analysis infrastructure in *Java* with support for pluggable classifiers.
- Implemented active learning stopping methods to train text classifiers with minimal training data in *Python*.

Projects

The Dandy Programming Language

April 2019 to Present

Kotlin | ANTLR

- Designing and programming a compiler for a novel multi-paradigm functional/imperative programming language with parametric polymorphism, higher kinded types, and comprehensive type inference.

WTSR 91.3FM Web Player

Feb. 2018

JavaScript, HTML, CSS | Firebase, Node.js, Gulp.js, ACRCLOUD

- Designed and programmed an online web player for TCNJ's official fully student-run radio station with a *Node.js* backend.
- Incorporated audio controls, audio fingerprinting for real-time song identification, and Spotify song links.
- Won "Best Technical Project" at the HackTCNJ hackathon.

Mano Basic Computer Assembler and Simulator

Oct. 2017 to Jan. 2018

Java | JavaFX

- Developed, tested, and deployed an assembler and hardware simulator for the Mano Basic Computer, a 16-bit computer, complete with a user interface and documentation using *JavaFX*.
- Was adopted for regular academic use in a college-level computer architecture course.

Skills

Proficient: Kotlin, Java, JavaScript, TypeScript, HTML, CSS, SCSS, C, Ruby, LaTeX, Markdown, Regular Expressions

Familiar: PostgreSQL, C++, C#, Closure Templates, Python, Handlebars, Jade, Bash

Tools, Libraries, Frameworks, & Runtimes: Git, Node.js, Rails, Gulp.js, Rollup.js, JavaFX, ANTLR, Bison, Flex

Expertise: Web Development, Asynchronous Programming, Programming Languages, Compilers, Music Theory

Native Languages: English, Hebrew