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, Software Engineering, Database Systems, Web Design, Computer Architecture, Operating Systems, Theory of Computation, Cryptography, Linear Algebra, Discrete Structures, Statistics, Linguistics

Employment

Google *May 2019 to Present*
Full Stack Web Developer
Java, JavaScript, HTML, CSS, Closure Templates
- Working on the Google Sites team to develop a feedback feature for ensuring sites remain current.
- Building a fully asynchronous backend with *Java* and a modular frontend with a component-based *JavaScript* framework.
- Internationalizing 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: Git, Node.js, Rails, Gulp.js, Rollup.js, JavaFX, ANTLR, Bison, Flex

Expertise: Web Development, Software Engineering, Asynchronous Programming, Compilers, Music Theory

Native Languages: English, Hebrew