

# tomer aberbach

email: tomeraberbach@gmail.com website: tomeraberba.ch phone: 201-937-5567 location: Ewing, NJ linkedin: tomer-a github: TomerAberbach

## + education

### The College of New Jersey (TCNJ)

BS Computer Science 2020

Mathematics Minor

Cumulative GPA: 3.9/4.0

Dean's List 4/4 Semesters

Golden Key Member (Top 15%)

UPE Member

## + skills

**proficient:** Kotlin, Java, C, JavaScript, TypeScript, HTML, Handlebars, CSS, LaTeX, Markdown, Regular Expressions

**familiar:** PostgreSQL, C#, C++, Python

**tools & libraries:** Git, Node.js, NPM, Gulp, JavaFX, ANTLR, Bison, Yacc, MongoDB, SVMLight, SLURM, Game Maker Studio

**fields:** Compilers, Software Engineering, Music Theory, Linguistics, Web Development, Machine Learning, NLP, Databases

**native languages:** English, Hebrew

## + awards

HackTCNJ · Best Technical Project Feb. 2018

Designed and coded the **WTSR 91.3FM Web Player (above)** for a 24 hour hackathon.

Google · Google Games 2nd Place April 2017

A logic and programming contest hosted by Google in New York City. Came in 2nd place out of 20 teams.

## + personal projects

### Stateless Linear Algebra Library

Kotlin

Designing and coding a stateless linear algebra library where values are lazily evaluated using function composition rather than intermediate values. Inspired by the Kotlin *Sequence* interface.

Aug. 2018 to Current

### Tomer Aberbach Static Website Generator

HTML, Markdown, Handlebars, CSS, SVG, JavaScript, YAML | Node.js, Gulp

Designed and coded a static website generator for my portfolio website using Node.js and Gulp. Automated the creation and pagination of the website's pages using YAML Frontmatter, Markdown, and Handlebars, as well as the minification and optimization of its source code and assets.

May 2018 to July 2018

### WTSR 91.3FM Web Player

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

Designed and coded an online web player for TCNJ's official fully student-run radio station complete with audio controls, audio fingerprinting for real-time song identification, and Spotify song links, for HackTCNJ.

Feb. 2018 to Feb. 2018

### Mano Basic Computer Assembler and Simulator

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. Adopted for academic use in a college level computer architecture course.

Oct. 2017 to Jan. 2018

## + activities

### Stitches Knit and Crochet Club · Publicist

Maintaining club presence on social media and crocheting fun projects such as blankets.

Sept. 2017 to Current

### Association for Computing Machinery (ACM) · Webmaster

Maintaining club website and holding coding challenges, demo tutorials, and hackathons.

April 2018 to Current

### Women in Computer Science (WICS) · Webmaster

Maintaining club website and planning and participating in discussions.

April 2018 to Current

## + employment

### Computer Science Department Tutor The College of New Jersey (TCNJ)

Java, C++, C, PostgreSQL, Regular Expressions

Assisting and tutoring TCNJ students in their computer science coursework ranging from introductory concepts such as methods, inheritance, and polymorphism to data structures, discrete math, algorithms, computer architecture, operating systems, and databases.

April 2018 to Current

### Java Tutor Varsity Tutors

Java

Developed and provided regularly scheduled personally tailored lessons on AP Computer Science to high school students in an online one-on-one setting.

Sept. 2017 to May 2018

### Mentored Undergraduate Student Experience (MUSE) Researcher

June 2017 to July 2017

### The College of New Jersey (TCNJ)

Java, Python | Weka, SVMLight, LIBSVM, scikit-learn, SLURM

Collaborated with another student in a selective 8-week full-time undergraduate research program. Developed an automated machine learning curve analysis infrastructure. Implemented active learning stopping methods to train accurate text classifiers with the minimal amount of training data required. Quantified the effectiveness of the different methods using variance and Cohen's kappa.

### Undergraduate Student Researcher The College of New Jersey (TCNJ)

June 2017 to May 2017

Java, Python | Weka, scikit-learn, SLURM

Collaborated with a small team (5) to test machine learning algorithms with varying amounts of training data. Developed a text normalization and feature extraction algorithm for text classification using regular expressions, stop words, and term frequency-inverse document frequency.