tomer aberbach

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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%)

skills

proficient: Java, Kotlin, C, JavaScript, 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.

employment

Computer Science Department Tutor April 2018 to Current

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.

Java Tutor Sept. 2017 to May 2018

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.

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 June 2017 to May 2017

The College of New Jersey (TCNJ)

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.

personal projects

The Dandy Programming Language

July 2017 to Current

Kotlin | ANTLR

Designing and coding a compiler using lexical analysis, abstract syntax tree generation, semantic analysis, and code generation with the goal of producing a novel and consistent custom programming language.

WTSR 91.3FM Web Player

Feb. 2018 to Feb. 2018

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.

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

Jill Marbach Portfolio Website

May 2017 to June 2017

HTML, Handlebars, CSS, JavaScript | Node.js, Gulp

Designed and a coded a portfolio website for Jill Marbach, a marketing major and graphic design minor, which showcases her work.

The Tide Original Composition and Video

April 2017 to May 2017

Ableton, Adobe Premiere

Composed, recorded, and produced a whiteboard stop motion music video for The Tide, an original piano composition.

activities

Stitches Knit and Crochet Club · Publicist Sept. 2017 to Current

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

Association for Computing Machinery (ACM) · Webmaster Sept. 2018 to Current

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

Women in Computer Science (WICS) · Webmaster Sept. 2018 to Current

Maintaining club website and planning and participating in discussions.