

tomeraberbach

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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 3/3 Semesters

Golden Key Member (Top 15%)

+ skills

proficient: Java, C++, C, HTML, Jade, CSS, JavaScript, LaTeX, Regex

familiar: C#, Python

tools & libraries: Git, Node.js, JavaFX, Bison, Yacc, ANTLR, SVMLight, SLURM, Game Maker Studio, Ableton

fields: Linguistics, Music Theory, Machine Learning, NLP, Game Design

native languages: English, Hebrew

+ employment

Sep 2017 to Current

Java Tutor

Varsity Tutors

Java

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

Jun 2017 to Jul 2017

Mentored Undergraduate Student Experience (MUSE) Researcher

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.

Jun 2017 to May 2017

Undergraduate Student Researcher

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

Jul 2017 to Current

The Dandy Programming Language

Java | 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.

Feb 2018 to Feb 2018

WTSR 91.3FM Web Player

HTML, Jade, CSS, JavaScript | Heroku, Node.js, Express.js, MongoDB, ACRCLOUD, Spotify Web API

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.

Oct 2017 to Jan 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.

May 2017 to Jun 2017

Jill Marbach Portfolio Website

HTML, CSS, JavaScript

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

Apr 2017 to May 2017

The Tide Original Composition and Video

Ableton, Adobe Premiere

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

+ awards

Feb 2018

HackTCNJ · Best Technical Project

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

Apr 2017

Google · Google Games 2nd Place

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

+ activities

Sep 2017 to Current

Stitches Knit and Crochet Club · Publicist

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

Sep 2018 to Current

Association for Computing Machinery (ACM) · Webmaster

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

Sep 2018 to Current

Women in Computer Science (WICS) · Webmaster

Maintaining club website and planning and participating in discussions.