

DANIEL DENENBERG

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EDUCATION

Omaha Central High School. GPA: 4.9048. Class Rank: 1. Percentile: 99.85% [High School]

- Honors Java 1-2. Grade: 5.0
- AP Computer Science. Grade: 5.0
- Honors Pre-Calculus/Trigonometry. Grade: 5.0

ACCOLADES

University of Nebraska at Omaha CSEdWeek Programming Contest. 3rd Place Winner. [10th]

National Association of Teachers of Singing (NATS) Nebraska Musical Theater 1st Place Winner [10th]

Modern Woodmen of America National Speech Contest 1st Place Winner out of 93,000 participants. [8th]

Modern Woodmen of America Nebraska State Speech Contest 1st Place winner. [7th]

Modern Woodmen of America Nebraska State Speech Contest 1st Place winner. [6th]

THEATER AWARDS

ACDA National Honors Choir TTBB Singer

Interlochen Arts Camp, Center for the Arts, Interlochen, Michigan. Musical Theater Program. [2015]

Theatre Arts Guild Omaha awards:

Outstanding Youth Actor, Jem Finch, *To Kill a Mockingbird*. [2016-2017]

Outstanding Youth Actor, Noah, *Caroline or Change*. [2015-2016]

Nominated for Outstanding Youth Actor, Colin, *Secret Garden*. [2014-2015]

Outstanding Youth Actor, Ralphie, *A Christmas Story*. [2014-2015]

Outstanding Performance by an Ensemble, *Les Misérables*. [2013-2014]

Omaha Community Playhouse awards:

Charles Jones Director's Award. [2016]

Outstanding Youth Award, Jem Finch, *To Kill a Mockingbird*. [2017]

Omaha Arts and Entertainment Awards

Best Youth Performance, *Caroline or Change*. [2015-2016]

EMPLOYMENT

Gallup Get HIP IT Intern. [August 2018 – March 2019]

- Worked on the *Starlite* project using a Raspberry Pi, Python, Google Speech to Text API and the facial_recognition open source library.

University of Nebraska at Omaha Cybersecurity Intern. [June 2018 – August 2018]

- Created and edited Cybersecurity related questions for a student Capture the Flag competition held at the University using Facebook's CTF API.
- Used JavaScript, HTML, CSS, Node.js, and Python for question creation related to encryption, hacking, and other cybersecurity related fields.
- Assisted Ph.D. in Cybersecurity student with Google Speech to Text API and analysis of results from her thesis project on internet security.

Alliance Francaise d'Omaha fundraiser performer. [August 2017 and November 2018]

- o Performed in French alongside singer Anne Marie Kenny for a Cabaret fundraiser.

SKILLSETS

Java, Python, JavaScript, C, HTML, CSS, Linux/Unix, Neural Networks, GitHub

NOTABLE PROJECTS

Starlight. <https://github.com/dannydenenberg/Starlite>. A hackable voice command assistant using a Raspberry Pi for the display.

- o Programmed using Python.
- o Worked on this project during my time at the *Get HIP IT Program*.
- o Implemented effective speech-to-text techniques using Google Cloud.
- o Trained a machine learning model to recognize user's faces.
- o Created responsive voice commands such as weather, searching Google, searching YouTube, and emailing others as well as responding to insults or an unknown phrase.

Simple Neural Network. https://github.com/dannydenenberg/simple_nn_in_java. Neural network implemented from scratch in Java.

- o Programmed with Java.
- o Includes matrix library with all basic element-wise operations as well as dot product, transpose, print functions, and more.
- o `ActivationFunction` class allows for specification of what type of activation function one wants to use for an individual layer in the network

Go-Game. <https://github.com/dannydenenberg/go-game>. A space-shooters game.

- o Programmed using Golang from scratch.
- o Used SDL2 with the Go programming language to render graphics.
- o Implemented realistic physics with multiple character classes such as enemy characters, players, and bullets.

BigInt. <https://github.com/dannydenenberg/BigInt>. An easy-to-use big integer library.

- o Programmed with Java.
- o Built on top of the `java.math.BigInteger` class.
- o Allows for easier initialization, calculations, and changing of the BigInt object itself as opposed to the tedious methods built into the `java.math.BigInteger` class.

PUBLICATIONS

Derivative of Sigmoid: Complete Understanding. <https://medium.com/@dannydenenberg/derivative-of-sigmoid-95ff1031ff1d> [2019]

The Perceptron: What is it? <https://medium.com/@dannydenenberg/what-the-heck-is-a-perceptron-d13a26eda172> [2019]

The Squeeze Theorem and Why I Like It. <https://medium.com/@dannydenenberg/the-squeeze-theorem-and-why-i-like-it-83e59428b167> [2019]