

# saejin mahlau-heinert

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## pages

in saejinmh

🔗 michionlion

🌐 michionlion.github.io

## courses

- Programming Language Concepts
- Theory of Computing & Formal Languages
  - Software Testing
- Interactive Entertainment
  - Analysis of Algorithms
    - Artificial Intelligence
  - Multi-Agent & Robotic Systems
    - Independent Study (Neuroevolution)
  - Distributed Systems
  - Electronic, Internet, & Intermedia Art I, II & III
    - Linear Algebra
- Combinatorics & Discrete Models

## languages

C, C#, C++, Crystal, Java, Golang, Python, JavaScript, HTML, CSS

## tools

Adobe Creative Suite,  $\text{\LaTeX}$ , Unity3D, Android SDK, Git, Gradle, (Ba)sh, Linux/GNU

## gpa

Major: 3.888

Minor: 3.500

Overall: 3.613

## awards

Distinguished Alden Scholar  
Alden Scholar

## interests

artificial intelligence, compilers, computer visualization, game engines, interactive art, programming languages, virtual reality development, virtual reality human interaction

## education

Aug 2015 – present

### Allegheny College

Computer Science Major, Studio Art Minor

May 2019 anticipated graduation

Meadville, PA

## experience

Jan 2016 – present

### Computer Science Teaching Assistant & Tutor

Allegheny College

*Student assistance and education*

- Answered questions and graded work in computer science classes
- Helped plan and create labs, developed scripts to assist with grading
- Tools utilized:  $\text{\LaTeX}$ , Bash

May 2018 – Aug 2018

### Software Development Internship

Daniel H. Wagner Associates

*Data registration for mine-like objects*

- Developed and enhanced automated data registration tool
- Optimized linear algebra mathematics library
- Tools utilized: Crystal, C, Bash, Git

Apr 2015 – Jul 2015

### Carnden Market Android Application

Allegheny College

*Android accounting application*

- Developed native Android app to support on-the-go cashiers
- Used Google Drive API to sync data among multiple tablets
- Tools utilized: Java, Netbeans, Android Studio, Android SDK

## projects

Feb 2018 – present

### GatorGradle

Gradle Plugin

*Grading tool for GatorGrader integration*

- Developed Gradle plugin to integrate GatorGrader grading checks into a `build.gradle` configuration for easy assignment creation
- Tools utilized: Java, Gradle, Github

Sep 2017 – Dec 2017

### py-battle-net

Independent Research

*Python based AI for the game Battleship using a neural network trained by a genetic algorithm*

- Programmed feed-forward neural network using matrix calculations
- Developed genetic algorithm for evolving weights in a neural network
- Created terminal-based Battleship game playable by implemented AI
- Tools utilized: Python, NumPy, Matplotlib

Nov 2016 – Dec 2016

### Doorway

VR Art Installation

*Art with Portals*

- Implemented VR (stereoscopic) portal visualization
- Created a stark and mysterious landscape with the aim of evoking a feeling of enigmatic ambience
- Tools utilized: Unity3D, C#, SteamVR, HTC/Valve Vive SDK