saejin mahlau-heinert

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pages

saejinmh
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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, 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, software development, computer visualization, game engines, interactive art, virtual reality development and human-computer interaction

education

Aug 2015 – present **Allegheny College** Meadville, PA
Computer Science Major, Studio Art Minor
Graduating May 2019

experience

Jan 2016 – present **Computer Science Teaching Assistant & Tutor** Allegheny College
Student assistance and education
- Answer questions and grade work in computer science classes
- Help plan and create labs, develop scripts to assist with grading
- Tools utilized: *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, Bash, Git*

Apr 2015 – Jul 2015 **Carrden 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 across multiple tablets
- Tools utilized: *Java, Netbeans, Android Studio, Android SDK*

projects

Feb 2018 – present **GatorGradle** Gradle Plugin
Grading tool for GatorGrader integration
- Develop 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 ambedo
- Tools utilized: *Unity3D, C#, SteamVR, HTC/Valve Vive SDK*