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pages

in saejinmh
michionlion
michionlion.github.io

courses

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

languages

C, C#, C++, Java, Python, MIPS, JavaScript (NodeJS, Vue.js), HTML5, CSS3

tools

Adobe Creative Suite, LaTeX, Unity3D, Android SDK, Git, (Ba)sh, Linux/GNU

gpa

Major: 3.869
Minor: 3.667
Overall: 3.605

awards

Distinguished Alden Scholar

interests

artificial intelligence, compilers, computer visualization, game engines, interactive art, programming languages, software development, video game development, virtual reality development, virtual reality hardware-software-human interactions

education

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

experience

Jan 2016 – present **Computer Science Teaching Assistant & Tutor** Allegheny College
Computer Science Department
- Answer questions and grade work in lower-level CS classes
- Help plan and create labs, developed script tools to assist with grading
- Tools utilized: *LaTeX, Bash*

Apr 2015 – Jul 2015 **Carr Garden Android Application** Allegheny College
Carrden Market
- Developed native Android application to support accounting
- Used Google Drive API to sync data among multiple tablets
- Tools utilized: *Java, Netbeans, Android Studio, Android SDK*

projects

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*

Feb 2017 – May 2017 **>brainfuse** Programming Language
*Compiler, interpreter, & language extension of brainf**k*
- Programmed compiler, interpreter, and language extension (including a pre-processor) for the brainf**k programming language
- Developed command-line scipts and tools for working with >brainfuse
- Tools utilized: *C, Bash*

Mar 2017 – May 2017 **bebop_teleop** ROS Package
Parrot Bebop Drone Teleoperation Node
- Developed teleoperation program for Parrot Bebop quadrotor drone
- Tools utilized: *C++, SDL, ROS*

Nov 2016 – Dec 2016 **Doorway** VR Art Installation
Art with Portals
- Implemented VR (stereoscopic) portal visualization
- Created stark and mysterious landscape, aiming to evoke emotions
- Tools utilized: *Unity3D, C#, SteamVR, HTC/Valve Vive SDK*