Mikael Mantis

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EDUCATION

Bachelor of Science in Engineering - **University of Pennsylvania**   Philadelphia, PA
Major: Computer Science   May 2018
Notable Coursework: Data Structures, Algorithms, Software Engineering and Design, Internet and Web Systems, Networked Systems, Computer Architecture, IOS Development, JavaScript, Data Visualization, Operating Systems

TECHNICAL SKILLS

Programming Languages: Proficient - Java, JavaScript (React, ES6, Node), C, HTML, CSS/SCSS **Familiar -** C++, Android, Swift, Redux, Python, LaTeX, SQL
Technology: AWS, Eclipse, VSCode, Git, Vim, HTTP, TCP/IP, Unreal Engine

EXPERIENCE

WillowTree Inc. – *Software Engineering Intern*   *Durham, NC*
o Implemented front-end components for corporate website in order to direct user traffic to submission forms.   *June – Aug 2017*
o Implemented back-end unit tests to detect and fix server and data parsing related bugs to improve consistency across the site.
o Performed extensive code review of a multimedia app's AWS backend system for a recognizable worldwide brand.
o Discovered security bugs, UI bugs, and issues with code readability and modularity.
o Technologies used: **JavaScript (ES6, React, Node), SCSS, HTML** and **Zeplin.io**

Computer Science Department, U.Penn – *CIS 110 Teaching Assistant*   *Philadelphia, PA*
o Taught recitations for 20 students to reinforce basic concepts of Java and Object-Oriented Programming.   *Sep 2016 – Present*
o Held office hours for debugging and answering course related questions. Graded assignments and exams for 250+ students.

The Daily Pennsylvanian – *Web Developer*   *Philadelphia, PA*
o Worked in teams to create informative web projects for U. Penn's undergraduate population (10,000+ students).   *Feb 2016 – May 2017*
o Technologies used: **JavaScript (D3.js)**, **CSS**, and **HTML**

Brav Conflict Management – *Software Engineering Intern*   *Remote – Based in CA*
o Developed web-based game for teaching conflict resolution skills. Designed levels and characters and   *May 2016 – Aug 2016*
  implemented game logic.
o Technologies used: **JavaScript (Three.js)**, **CSS**, **HTML**, and **Maya**

PROJECTS

[Tricking Survey (Ongoing)](Tricking Survey)   *React, ES6, SCSS, D3*
- Solo project, played the role of data analyst, designer, and full-stack engineer.
- Single page application that compiles and displays data related to the sport of martial arts tricking (300+ responses)

Flying Mantis Search Engine   *Java, AWS (EC2, S3, RDS), SQL, JavaScript, AJAX, HTML, CSS*
- Worked in four-person team to build a Google based search engine running on an Amazon EC2 instance with crawled index data stored on S3 and RDS instances.
- Built Java Servlet application that utilized the S3 and RDS APIs to aggregate queries from our PageRank and TF-IFDF indices using SQL. Built the multithreaded HTTP server that ran on the EC2 instance.
- Designed and developed front-end content to be served by the server upon receiving browser requests. Used AJAX to dynamically reload components of the page upon search queries.

Penn-OS   *C*
- Built a flat file system based off of a file allocation table along with system calls modeled after UNIX system calls to interact with said file system.
- Integrated with teammate's kernel via a shell that we wrote using only the implemented system calls for IO.

Mini-Minecraft   *C++, OpenGL*
- Built pseudo-random, procedural terrain generator based off of 3D version of Perlin-Noise algorithm to mimic the terrain of Minecraft. Terrain included 8 different biomes, and terrain generation was optimized to run at 60 fps.
- Also implemented UV texture-mapping via OpenGL

For more projects see: https://mantism.github.io/

LEADERSHIP

President *Penn Hype Dance Crew*   *March 2017 – Present*
- Oversaw all board operations, assisted other board members as needed, served as liaison for alumni, set goals and vision for the entire team, and was the primary point of contact between the University and the team of 38 people. Previously Vice President (2016-2017) and Internal and External Affairs Chair (2015-2016)

Social Chair *Osiris Senior Society*   *April 2017 – Present*
- Organized social events for 34-member club of seniors made up of leaders from various performing arts groups across campus.

Other Affiliations: Freaks of the Beat Dance Crew (VP Internal 2015-2016), Check One: Mixed Heritage Club (Marketing Chair 2015 – 2016), National Society of Black Engineers