

A L E C S W E E T

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Portfolio: [AlecSweet.github.io](https://github.com/AlecSweet)

EDUCATION

University of Texas at Austin
GPA: 3.2

*Bachelor of Science in
Computer Science, May 2021*

Relevant Coursework

- Software Engineering
- Principles of Computer Systems
- Computer Organization and Architecture
- Data Structures
- Matrices
- Probability and Statistics
- Discrete Mathematics

LANGUAGES

| | | |
|-----------|--------|------------|
| Java | 7yrs | Proficient |
| C/C++ | 2yrs | Familiar |
| Python | 1yr | Familiar |
| JS | 1yr | Familiar |
| HTML5/CSS | 1yr | Familiar |
| C# | .5yrs | Beginner |
| Lua | .3yrs | Beginner |
| Bash | 2.5yrs | Beginner |
| SQL | .5yrs | Beginner |

TECHNOLOGIES

GitHub/GitLab/Git
OpenGL ES 2.0
Docker
Apache: Maven, POI
Amazon MWS
AWS: RDS, Elastic Beanstalk
Flask/SQLAlchemy
Selenium
Jsoup
jQuery
IDEs: Eclipse, Android Studio, Visual Studio
Agile Methodology

PROJECTS

Pixel Invaders, Sole Developer

Android Mobile Game: Planned Release October 2020

https://github.com/AlecSweet/Pixel_Invaders

- Wrote 15,000+ lines of code with core Java 8 and OpenGL ES 2.0
- Developed a logarithmic collision detection algorithm that handles dynamic pixel by pixel destruction of multiple enemies consisting of thousands of pixels each
- Developed a linear blob detection algorithm which allows the efficient detection of stray pixel groupings
- Built a multithreaded engine that runs at 60fps under normal circumstances with budget hardware (Snapdragon 808 CPU+ and an Adreno 418 GPU+)

Pixel Invaders Website, Sole Developer

Pixel Invaders Exhibition Website: Planned Completion March 2020

https://AlecSweet.github.io/Pixel_Invaders

- Developed from scratch using JavaScript with jQuery, HTML5, and CSS
- Implemented responsive website architecture that formats properly given almost any hardware and resolution
- Created an efficient full-page parallax effect with dynamic user interactivity to mirror the Pixel Invaders in game environment

PolicyAnd.Me, 5 Developer Team

Website Database for US Policy Information: Planned Completion December 1st, 2019

<https://PolicyAnd.me>, <https://gitlab.com/Uongio/cs373-idb>

- Constructed database hosted with AWS' RDS using MySQL populated with US policy information ascertained from other RESTful APIs
- Created a RESTful API for data which is documented with Postman
- Helped Implement a backend with Flask and SQLAlchemy hosted by AWS' Elastic Beanstalk to retrieve data for our frontend
- Adhered to an Agile working environment with CI, test-driven development, a main repo, pair programming, frequent team meetings, roughly 2-week sprints, goal setting, time estimations, and rotating team leads

PintOs, 3 Developer Team

A Basic, Private Iteration of Stanford's PintOs

- Worked constructively with a team through effective communication, use of GitHub, and pair programming techniques
- Implemented basic OS functionalities including threading, virtual memory, process management, and a file system

WORK EXPERIENCE

Product Listing / Independent Software Development

KdProTools, Online | June 2016 – May 2018

- Responsible for developing software with Amazon MWS integration to search, gather, and compare product data in order to create and populate product listings
- Developed web scraping scripts with Selenium, Jsoup, and Apache POI to gather supplier information and export it to Excel spreadsheets
- Developed software to handle price updating for a 30,000+ item inventory
- Analyzed and resolved issues with 3rd party product management software

Notable Performance:

- Increased average gross monthly sales from ~\$61,000 to ~\$134,000 and net profit by 224% over a 1.5-year period