# Darren Lim

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## Skills

**Languages:** Python, C#, Java, C++

**Technologies:** Microsoft Visual Studio, Unity 3D, Vim, Git, Github, Eclipse, Jupyter Notebook, PyCharm, Powershell, Trello, Slack

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## Developed Applications

**Search Engine**                                                                                           **Feb 2020 – Mar 2020**

Programmer – *Simple Search Engine* – [https://github.com/dartren01/SearchEngine](https://github.com/dartren01/SearchEngine)

- Reduced search speed to **under 300 milliseconds** by implementing multithreading when searching query words in the index.
- Analyzed corpus documents by tokenizing and stemming words from **JSON** files using **Python**.
- Developed an inverted index to store over tens of thousands of web pages for increased search engine efficiency.
- Decreased memory load to under 60% of the size of the index by offloading smaller partitions onto the disk.
- Improved document search precision and accuracy by integrating term frequency - inverse document frequency (TF-IDF) and cosine similarity scoring.

**Dogs Vs. Cats: Space Edition**                                                                            **Sep 2019 – Mar 2020**

Project Lead – *2D Bullet Hell Android Game* – [https://burger0l0.itch.io/4pm-game](https://burger0l0.itch.io/4pm-game)

- Designed core in-game logic and gameplay experience using **C#** in **Unity3D**.
- Achieved replay value by implementing a score system and an innovative game mechanic.
- Enhanced software performance by conducting playtests to document accuracy, consistency, and completeness.
- Delegated tasks to each team member to increase production rate and keep up with deadlines.

**Allbirds Shop Bot**                                                                                       **Jun 2019 – Aug 2019**

Project Lead – *Shopify Shopping Helper* – [https://github.com/carminechoi/Allbirds-Shop-Bot](https://github.com/carminechoi/Allbirds-Shop-Bot)

- Interacted with product information from the Allbirds website through requesting, storing, and interpreting **JSON** files using **Python**.
- Increased product collection **efficiency by over 50%** by using multiprocessing.
- Utilized **PyQt5** to create a graphical user interface for easier navigation and to display products.
- Incorporated **Selenium** to automate online product ordering using user-inputted information.

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## Education

**University of California, Irvine**

*Bachelor of Science: Computer Game Science, March 2020*

- GPA: 3.58/4.0
- **Relevant Coursework**: Data Structure Implementation and Analysis, Intermediate Programming in Python, Software Requirements and Analysis

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## Activities

- Performing music on stage by playing guitar, bass, or drums with a band.
- Hitting small, white balls at a golf range.
- Engaging in online communities through playing competitive video games.