

# Pieter Benjamin

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Junior, Paul G. Allen School (3.54 GPA)

<https://pieterbenjamin.github.io/personal-website/>

## SKILLS

Git/Github (2 years)

SML

BASH

C

C++

Java (Fork/Join, Spring)

Python (Scrapy, Pygame)

## RELEVANT COURSES \*

Hardware/Software Interface  
Language Design

Systems/Network Programming  
ADTs and Parallelism  
Software Design/Implementation

Discrete Math  
Applied Stats.  
Lin. Algebra

\*currently taking CSE 401 and 455  
(Compilers and Computer Vision)

## EXPERIENCE

**Software developer, impact++** *October 2018 – present*

- Club with 5+ teams of ~7 developers volunteering with Seattle-based nonprofits
- Collaborated with Farestart to rework react frontend for data visualization.
- Tested, discussed, and fixed issues of Small Basic with Microsoft's dev. Team
- Developed club website - <https://impactplusplus.github.io/website/>

**Undergraduate Researcher, IBIC** *February 2018 - September 2018*

<https://github.com/PieterBenjamin/birthdaycard>

- Wrote/documented a Bash program to abstract the process of choosing/using a slice of an MRI scan to create a thank you card for participants in a study on Parkinson's Disease.

**Dinner lead, ROOTS** *October 2017 – September 2019*

- Responsible for organizing 4-5 volunteers cooking for 50-70 homeless guests.
- Given full authority over kitchen, including interactions between guests and volunteers.

## PERSONAL PROJECTS

**Checkpoint** - <https://github.com/PieterBenjamin/Checkpoint>

- Local version control for standalone files. Written solely in C, using LinkedList, HashTable, and Tree data structures I implemented (also in C).

**RayCastingEngine** - <https://github.com/PieterBenjamin/RayCastingEngine>

- Raycasting engine written in python. Offers map creation via 2D arrays and choice between top down and first-person viewing angle.

**GoodReads-Scraper** - <https://github.com/PieterBenjamin/GoodReads-Scraper>

- Used Scrapy (Python library) to implement a [goodreads.com](https://www.goodreads.com) scraper. Given an author's name, scrapes the quote section of that author, and saves the quotes in JSON files.

**QuoteGenerator** - <https://github.com/PieterBenjamin/QuoteGenerator>

- Paired project with the quote scraper, randomly selects one of the saved GoodReads quotes from a JSON file and prints to stdout upon opening a new terminal window.

## MAJOR CLASS PROJECTS

**File System Crawler/Indexer – 333**

- Built a reverse index that allows searching for words in documents in constant time. (C/C++)

**Jamboree - 332**

- Parallelized Alpha-Beta chess algorithm using Java fork-join framework.

**CampusMaps - 331**

- Implemented a Graph, Dijkstra's algorithm, and test suite (all in Java) paired with react frontend.