

John C. Allwein

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EDUCATION

Rensselaer Polytechnic Institute - Troy, NY

GPA - 3.97 / 4.00

Bachelor of Science, Computer Science and Economics -

Expected Graduation December 2021

Dean's Honor List @ RPI - Fall 2018, Spring 2019, Summer 2020. Recipient of Rensselaer Medal for outstanding math and science students.

Relevant Coursework:

1. Data Structures - Utilized C++ along with various algorithm design and data structures to implement an NP-hard Slitherlink solver, along with image comparison and crossword generation tools.
2. Computer Organization - Utilized C,C++ to implement a MIPS Pipeline Simulator from scratch.
3. Operating Systems - Utilized C,C++ to implement a unix shell and CPU scheduling algorithm simulator
4. Principles of Software - Utilized Java to implement high-performance graph simulations of various datasets
5. Economics: Principles of Economics (Intro to micro and macro), Money and Banking, Intermediate Microeconomic Theory

PROFESSIONAL EXPERIENCE

Western Digital - Longmont, Colorado

Firmware Engineering Intern

August 2019 - December 2019

Working on enterprise HDD firmware development, focusing on technical-debt reduction across the codebase.

Rensselaer Polytechnic Institute - Troy, NY

Undergraduate Mentor - Open Source Software

May 2019 - August 2019

Assisted in hands-on lab and office hours experiences centered around the usage of various modern open source tools (Git, Docker, Numpy, R, Tensorflow) and the application of them.

Rensselaer Polytechnic Institute - Troy, NY

Undergraduate Programming Mentor - Data Structures

Janaury 2019 - May 2019

Assisted in hands-on lab and office hours experiences centered around the implementation, debugging, and effective usage of traditional data structures to solve problems.

PROJECTS

torn.space

Assistant System Administrator & Developer

September 2018 - Present

Automated various parts of the infrastructure and added HTTPS support to the game through the usage of nginx reverse proxying. Implemented a server monitoring and task managing system, known as Mira, to oversee infrastructure. Worked on improving game security optimization, refactoring of server software to better support future growth and scalability.

libgdx

Project Member

November 2013 - Mid 2015

Libgdx is a free and open source (FOSS) game framework for developing games in Java / JVM-based languages. It allows developers to deploy their same codebase on the Desktop, Web (via HTML5 / GWT), Android and iOS. Libgdx has been deployed on various games, sometimes with tens of millions of players. During my active time on the project, I achieved reductions in code duplication across the codebase, helped clean up the Android backend by removing deprecated code and simplifying existing code, and developed new features, such as adding immersive mode support.

SKILLS

Languages: C++, C, Java, Python, .NET framework, Node.js, MIPS & ARM Assembly

Software: Microsoft Windows 98-10, Microsoft Office, GNU/Linux (Debian, Ubuntu, and Arch), ChromeOS, Apache, Nginx, Eclipse, Android Studio / Tools, RoboVM, VirtualBox, Clang, JVM, Google Suite, Git, Dr. Memory, Valgrind, GDB, Google Web Toolkit, LaTeX, Docker

Clubs and Organizations

Member, RPI CS Department - CS Mentor, Volunteer

Member, Rensselaer for Ethics in Science, Technology, and Engineering (RESET)

Creator, EnjoyTroyBot

January 2019 - Present

May 2019 - Present

Fall 2018 - Present