

John “Jackson” Parsells

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Education

Tufts University

Bachelor of Science in Computer Science, Minor in Economics

GPA: 3.75/4.00

Coursework: Algorithms, Artificial Intelligence, Calculus II, Computer Systems Security, Data Structures, Discrete Mathematics, Machine Structure and Assembly Language Programming, Web Engineering

Expected May 2022

Medford, MA

Experience

Tufts University

Teaching Assistant, Department of Computer Science

Aug 2020 – Present

Medford, MA

- Convey core principles of C++ to more than 300 students in Introduction to Computer Science course
- Instruct 20 students in weekly lab to reinforce algorithmic understanding and introduce implementations
- Hold 10 hours of office hours for 1:1 help and give personalized feedback through grading each week

Mumvia

Web Developer

Jun 2020 – Aug 2020

Remote

- Conducted in depth research, testing, and automation of all preexisting web functionality
- Automated testing through Selenium for proprietary social media API implementation
- Orchestrated reconstruction of fundraiser page driven by result of market research

Technical Skills

Programming Languages | C++, C, Java, SQL, Javascript, JSP, HTML, CSS, LaTeX

Frameworks | Node.js, React.js, JSP

Software Packages | Bash, GitHub, Nano, VS Code, Microsoft Office, G-suite

Projects

Image Compressor and Decompressor

Oct 2020

- Utilized bit packed representations of image pixels to build a compressor and decompressor
- Designed and implemented bit pack program to pack signed or unsigned integers into 64 bit words
- Generated consistent image differences of 1% when an image went through compressor then decompressor

Image Rotator

Sep 2020

- Built jpegtran style image transformations with a focus on optimizing cache performance
- Devised and implemented a blocked polymorphic 2D array in C to accelerate program runtime
- Quantitatively analyzed how hardware locality advantages impact the efficiency of a program

Kalmar Nyckel Virtual Auction

May 2020 – Oct 2020

- Handled migration of client database from Donor Perfect to Ready Set Auction to support COVID safe auction
- Generated CSV templates with Excel for others to import donations and packages easily
- Designed auction website with intuitive interface intended for audience unaccustomed to online transactions

Activities

180 Degrees Consulting

Jan 2020 – Present

Student Consultant

- Provide free consulting for local nonprofits by drafting deliverables and holding weekly meetings with client

Tufts Office of Residential Life

Aug 2020 – Present

Residential Assistant (RA)

- Mentor and support 13 first year residents, providing them with resources to build a healthy foundation

Tufts Financial Group

Sep 2019 – Present

Financial Analyst

- Attend weekly training session discussing current events from a financial lens and learning about finances