Benjamin Kelly

COMPUTER SCIENCE AND GAME DESIGN STUDENT

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Education

Rensselaer Polytechnic Institute *Troy, NY*
B.S. in Computer Science *Aug. 2018 - May 2022 (Projected)*
- GPA: 4.0/4.0

Skills

Programming	C/C++, C#, Java, Python, Linux, Unity3D, Unreal Engine 4, OpenGL
Coursework	Introduction to Algorithms, Advanced Computer Graphics, Economics and Computation, Game Architecture, Linear Algebra, Game Development 1, Introduction to Artificial Intelligence

Experience

Amazon Web Services *San Francisco, CA*
Software Development Engineering Intern *May. 2021 - Aug. 2021*
- Worked as intern within Amazon Games Publishing Services on features related to account linking and in-game social features
- Developed and owned project to integrate QR codes into user experience flow, working with UX and Project Management to design requirements.
- Worked on needed bug fixes and feature improvements related to AGPS Persona services

Western Digital *Longmont, CO*
Firmware Engineering Intern *Sep. 2020 - Dec. 2020*
- Helped design and implement firmware for hard drives, specifically related to formatting
- Deployed C++ code onto an embedded environment
- Worked in a fast paced Scale Agile Framework (SAFe) including training in Agile

Boston Biomedical Inc. *Cambridge, MA*
Commercial IT Intern *Jun. 2019 - Aug. 2019*
- Developed an integration strategy between company website and Workday applicant tracking system.
- Redesigned the company's online career page.
- Communicated with human resources and marketing team to gather requirements for the website and ensure easy transition.

Rensselaer Polytechnic Institute *Troy, NY*
Undergraduate Teaching Assistant *Jan. 2019 - Present*
- Worked as an undergraduate TA for classes including Data Structures, Principles of Software, and Introduction to Artificial Intelligence
- Designed and graded exams and homeworks, as well as run office hours and labs.
- Worked one-on-one with students reinforcing new concepts, providing feedback, and helping to debug code

Research and Projects

HEALS Project *Troy, NY*
Undergraduate Researcher *May 2020 - Aug. 2020*
- Worked with the HEALS project, a collaboration between IBM and RPI to use artificial intelligence and semantic web technologies to aid in determining treatment for patients with diabetes.
- Helped design and implement a UI interface for physicians' use in exploring treatment options.
- Integrated UI service with patient RDF graphs by designing RDF structure and querying using SPARQL.
- Helped design and verify unit tests for an ontology autonomic deduction tool within whyis, a graph creation and reasoner tool

Blockchain Biomedical Data Sharing *Troy, NY*
Undergraduate Researcher *Jan. 2021 - May 2021*
- Worked with a research team in RPI's IDEA center developing a biomedical research data sharing system built with semantic web technologies on the Ethereum blockchain using smart contracts
- Designed and implemented an ontology to represent the biomedical data lifecycle, including types of data sharing agreements
- Researched intersection of blockchain technologies and ontologies and built on existing work when designing the new system

Gerrymandering Under Uncertain Preference Profiles *Troy, NY*
Research Project Under Supervision of Professor Lirong Xia *Jan. 2021 - Present*
- Researched the problem of gerrymandering as a graph problem under imperfect voter information
- Worked on problem formalization, algorithm design, theoretical complexity, and experimental results
- Implementation done in Python3

Classifying Virtual Reality Movements with Limited Sample Size *Troy, NY*
Final Research Project for Advanced Computer Graphics *Mar. 2021 - May 2021*
- Designed a system to classify virtual reality hand motions at runtime based on a small example pool
- Used self-recorded and existing motion capture databases to gather example motions
- Built within Unity 3D in C# using Unity's SteamVR plugin

Submitty   *Troy, NY*
Open Source Online Grading Platform   *Oct. 2019 - Present*
- Designed online office hours queue system now used by many of the computer science classes on campus
- Designed online polling system to aid in transition to hybrid classes for the fall of 2020
- Worked on other various bugs, maintenance, and features

Leadership

RPI Chapter of Upsilon Pi Epsilon, Computer Science Honors Society   *Troy, NY*
Vice President, President   *May. 2019 - Present*
- Oversaw individual committees as well as maintaining the day to day operations of the organization.