Clayton Rayment

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EDUCATION

RENSSELAER POLYTECHNIC INSTITUTE

MS in Computer Science
Expected Dec 2017 | Troy, NY
Department of Computer Science
GPA: 3.0 / 4.0

BS in Applied Physics
May, 2016 | Troy, NY
Conc. in Computational Astrophysics
Department of Physics, Applied Physics, and Astronomy
Dean's List (All Semesters)
GPA: 3.27 / 4.0

COURSEWORK

GRADUATE

Robotics I
Computer Operating Systems
Parallel Computing
Computer Graphics
Design and Analysis of Algorithms
Graph Theory

UNDERGRADUATE

Computer Science:
Data Structures
Programming in Java
Parallel Computing for Engineers
Foundations of Computer Science
Computer Organization

Physics:
Quantum Physics I/II
Electromagnetic Theory
Theoretical Mechanics
Observational Astronomy
Astrophysics

SKILLS

PROGRAMMING

Fluent:
C/C++ • Python • LaTeX
Familiar:
Java • SQL • JS • LUA • Assembly
Extensions:
OpenCL • CUDA • OpenMP • MPI

AMATEUR ASTRONOMY

Experience with several telescopes, tracking software, and imaging with DSLR, QSI 6000, and SBIG 800 series CCDs. Used IDL for image data reduction, including asteroid tracking.

EXPERIENCE

RENSSELAER POLYTECHNIC INSTITUTE | Graduate TA

January 2017 – Present | Troy, NY
Graduate Teaching Assistant for Stars, Galaxies, and the Cosmos, and Intro to Astronomy and Astrophysics. Helped with course preparation and execution (Grading, proctoring, leading recitation, etc.).

ACTION WORKS | Robotics Instructor

May 2015 - Aug 2015 | Longmont, CO
Taught elementary through middle school students robotics using the LEGO Mindstorms robotics platform. Used both NXT and EV3 kits, and facilitated a learning environment appropriate for the age group.

WOODWARD INC. | Engineering Intern

May 2013 – Aug 2013 | Fort Collins, CO
Rewired, modernized, and documented industrial test stand. Read schematics, and diagnosed electrical systems.

RESEARCH

MILKYWAY@HOME | Researcher

Aug 2014 – Present | Troy, NY
Worked with Dr. Heidi Newberg on MilkyWay@Home, a distributed computing project with a user base of over 20,000 active users, simulating dwarf galaxy tidal stream formation. Research focused on parallelizing large-scale n-body calculations to run on GPU compute devices using OpenCL.

AWARDS

2014	top 52/2500	KPCB Engineering Fellow
2014	2nd most points	Google Code Jam, Qualification Round
2014	1st/50	Microsoft Coding Competition, Cornell
2013	National	Jump Trading Challenge Finalist
2013	7th/120	CS 3410 Cache Race Bot Tournament
2012	2nd/150	CS 3110 Biannual Intra-Class Bot Tournament
2011	National	Indian National Mathematics Olympiad (INMO) Finalist
2010	National	Comp. Soc. of India's National Programming Contest

SOCIETIES

2014	top 12%ile	Tau Beta Pi Engineering Honor Society
2014	National	The Global Leadership and Education Forum (tGELF)
2012	National	Golden Key International Honor Society
2012	National	National Society of Collegiate Scholars