Taisuke **Yasuda**

Mathematics · Computer Science

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Education

Carnegie Mellon University — *Pittsburgh, PA*

BS and MS in Mathematics, Additional Major in Computer Science — *Aug 2015 - May 2019*

- Accepted into Honors Math Program, which leads to a MS in mathematics in 4 years
- Awarded Carnegie Scholarship for academic and artistic achievement
- GPA 3.85/4.00, Dean's List all semesters

Selected Coursework: Theoretical Computer Scinece (Graduate), Computer Systems, Parallel and Sequential Data Structures and Algorithms, Probability (Honors), Complex Analysis (Graduate), Analysis (Honors), Abstract Algebra (Honors), Server Side Scripting with Node, Modern Version Control with Git

Experience

Mathematics Dept., Carnegie Mellon University — *Pittsburgh, PA*

Putnam Seminar Grader — *Sep 2016 - Dec 2016*

- Graded homework for Prof. Po-Shen Loh's Putnam Seminar course for a section of ∼40 students
- Provided personal feedback and help to students

Barth Lab, Neuroscience Dept., Carnegie Mellon University — *Pittsburgh, PA*

Research Assistant — *Jan 2016 - Present*

- Constructed and analyzed a hierarchical statistical model of the behavior of SST-Pyr synapses
- Implemented statistical analyses and visualizations in Python and R

Max Planck Florida Institute for Neuroscience — *Jupiter, FL*

Research and Programming Intern — *Jun 2014 - Aug 2014*

- Developed a Java program used in a virtual reality system used to monitor brain activity of mice
- Mathematically derived geometric transformation mapping 2D game images to a 3D virtual reality experience
- Incorporated the transformation into the virtual reality system via Unity game engine

Projects

Japanese School Library Management Website — *Miami, FL*

Volunteer Project — *June 2016 - Present*

- Developed a MEAN stack website for managing the library of the Miami Japanese School, ported from an outdated system
- Worked in person with librarians on requested features and demoed to the school administration
- Currently manages ∼250 students and ∼4000 books

Dendrite Trace — *Pittsburgh, PA*

15-112 Term Project — *Nov 2015 - Dec 2015*

- Developed an algorithm based on reinforcement learning for automatic tracking of dendrites on 3D images
- Incorporated machine learning classification algorithms for local search
- Implemented the algorithm in Python along with tools for manually labeling training data

Honors & Awards

April 2017	**Top 500**, Putnam Mathematical Competition	*Pittsburgh, PA*
Nov 2016	**Research Fellowship in Computational Neuroscience**, Center for Neural Basis of Computation	*Pittsburgh, PA*
Feb 2016	**Top 3**, TartanHacks	*Pittsburgh, PA*
Feb 2016	**Winner**, CMU All University Orchestra Concerto Competition	*Pittsburgh, PA*
Apr 2015	**2nd Place**, Pathfinder Scholarship in Mathematics	*Palm Beach, FL*

Skills

Programming Languages

Comfortable	Python, JavaScript (ES6, NodeJS)
Familiar	Java, Matlab, C/C++, R