

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 3.78/4.00, Dean's List all semesters

SELECTED COURSEWORK: Algorithms for Big Data (Current, Graduate), Discrete Math (Current, Graduate), Measure and Integration (Current, Graduate), Theoretical Computer Science (Graduate), Computer Systems, Parallel and Sequential Data Structures and Algorithms, Probability (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 - Aug 2017

- 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

Website for US Mathematics Competition Association

Pittsburgh, PA

FREELANCE PROJECT

August 2017 - Present

- Full stack development of website (React/Redux, Express/Node) for nationally shared math competition problem proposals
- Lead development in a team of 3, teaching React and Redux concepts to the frontend developer
- Demoed to Harvard MIT Mathematics Tournament, Princeton University Mathematics Competition, and other major competitions

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- Developed a MEAN stack website for managing the library of the Miami Japanese School, ported from an outdated system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 and machine learning for automatic tracking of dendrites on 3D images
- 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

Skills

Comfortable

Python, JavaScript (ES6, NodeJS)

Familiar

Java, Matlab, C/C++, R, MongoDB