

Joseph A. Boyle

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Work Experience

Cognition IP

San Francisco, CA

SENIOR SOFTWARE ENGINEER (MONGO, EXPRESS, ANGULAR, NODE [MEAN], JAVA, PYTHON, PHP, C)

Jan 2019 - Present

- Worked with attorneys and customers to develop efficient and enjoyable to use workflows to automate the legal pipeline. (MEAN)
- Sped up critical product user journey (filing legal matter) by a factor of 2 by automating usage of legacy patent office services. (Java)
- Integrated OAuth, payments, time tracking, mailing, docket and file management into a pipeline to greatly increase attorney productivity. (JS, Java)
- Designed and launched system to manage customer invoicing and payments. (MEAN)

Rutgers University, Computer Science Department

Piscataway, NJ

LEAD DEVELOPER (PHP, MYSQL; MONGO, EXPRESS, ANGULAR, NODE)

July 2017 - Present

- Lead development of a recitation management system, utilized in courses by over 5,000 students.

Rutgers University, Rutgers Learning Centers

Piscataway, NJ

HEAD LEARNING ASSISTANT (INTRODUCTION TO COMPUTER SCIENCE)

August 2016 - Present

- Managed the lesson plans and weekly activities for 29 Teaching Assistants while leading my own recitations.

Rutgers University, School of Arts and Science IT

Piscataway, NJ

PROGRAMMER (PHP, MYSQL, JOOMLA!)

September 2015 - June 2016

- Developed a series of course searching modules and a staff directory module on Joomla!.
- Automated the transfer of data from old systems to the Joomla! CMS.

Education

Rutgers University, New Brunswick

New Brunswick, NJ

B.S., COMPUTER SCIENCE. CUM LAUDE, HONORS PROGRAM

September 2015 - May 2019

Academic Research

RAPIDS: Reconfigurable Approximation Application Framework

Summer 2018

- Developed an approximation-based networking application utilizing research in the RAPIDS framework.
- Created a testing framework to evaluate energy consumption of mobile devices on various networking configurations.

Automatic Code Grading: Code Quality Analysis and Hint Generation

Summer 2018

- Worked with a graduate student to develop new techniques in hint systems for automatically grading student code.

Visual MIMO: Calibrationless visible-light communications framework using Android phones

Spring 2016 - Spring 2017

- Designed and built an automated testing bench to evaluate message transmission accuracy.
- Conducted an experiment on the effects on message retrieval accuracy when constraining the volume of differential metamers.
- Presented at Computer Vision and Pattern Recognition 2016 conference.

Relevant Coursework

Undergrad Computer Science	Algorithms, Computer Architecture, Compilers, Databases, Data Structures, Discrete Structures I & II, Internet Technology, Systems Programming, Principles of Programming Languages, Honors Seminar, Independent Study in Computer Vision
Grad Computer Science	Compilers I, Natural Language Processing, Brain Inspired Computing

Independent Projects

Speckle	A general usage programming language written in C that compiles to x86.
Char	An 8-bit architecture with its own instruction set, CPU design, and simulator written in C.
VoxelGen	A procedurally generated Minecraft clone written in C++, using OpenGL for graphics.
Charm	A functional programming language written in C.
Chemify	An Android application which solves various chemistry problems such as predicting chemical reactions, dimensional analysis, and chemical nomenclature.

Skills

Languages	C, Java, PHP, Android, MySQL, C++, Scheme, MATLAB, Javascript (Typescript, Angular, Express, Node), Python
Software	Linux, Git, OpenGL, MongoDB, MySQL