

Charles Marsh | Software Engineer

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Education

Princeton University

Princeton, NJ

B.S.E. (Computer Science), 3.90/4.00 GPA (unweighted)

2011–2015

Member of the Tau Beta Pi honor society. Relevant coursework includes Algorithms & Data Structures (A+), Theoretical Machine Learning (A), and independent research in software-defined networking (A).

The American School in London

London, UK

H.S. Diploma, 4.03/4.33 GPA (unweighted)

2007–2011

Graduated as Valedictorian. 2330 SAT I, 800 SAT II Math, Chemistry, and Physics.

Work Experience

Khan Academy

Mountain View, CA

Software Development Intern

May–August 2014

Full-stack development for the Content Tools Team, working with one of the largest and most advanced React.js codebases in the world. Led development efforts to integrate thousands of existing math exercises (designed for the web) into an innovative, handwriting recognition-based iPad application.

Microsoft

Seattle, WA

Software Development Intern

June–August 2013

Front- (TypeScript, HTML, CSS) and back-end (C#, C++, IntelMKL) development for Bing's Core Relevance Incubation Team, with a focus on visualizing novel machine learning techniques at massive scale.

Toptal

Remote

Head of Content

March 2013–May 2014

Grew Toptal's Engineering Blog from scratch to hundreds of thousands of unique visits and regular production of thought-leading technical content, sourced from engineers around the globe.

Princeton University

Princeton, NJ

Research Intern

July–August 2010

Investigated Dark Matter with a focus on purifying argon gas for use in neutrino experiments.

Projects

Readjoy: [Node, Express, React] A web application for aggregating and recommending long-form journalistic content. Built with JavaScript from end-to-end.

Jasper: [Python] An open source platform for developing always-on, voice-controlled applications. Featured in WIRED, Forbes, and others. The [GitHub repository](#) has over 1100 stars and 250 forks. These days, I both contribute code and manage the development process.

Semantic: [Python] A library for extracting semantic information from text. Available via [PyPI](#).

Quizzler: [Objective-C, Python] A quiz-based iOS app that generates its own questions using NLP techniques. Rated the first place entry in Facebook Seattle's *Summer of Hack* Hackathon.

EveryCollegeCal: [Objective-C] An iOS app for tracking undergraduate college calendars. Downloaded by thousands of users through the App Store. *Note: this project is no longer maintained.*

type blog: [HTML, SASS] [Personal blog](#), with links to the aforementioned projects, academic papers, and blog posts on Python, JavaScript, etc.

Extracurriculars

Introduction to Hacking

Co-Creator, Instructor

Princeton, NJ

March–May 2014

Designed and taught course for hundreds of Princeton University students focused on applied topics in programming, such as web scraping and computer security. See the [course website](#) for more.

Computer Science Department

Undergraduate Grader

Princeton, NJ

January–May 2014

Graded programming assignments for Algorithms & Data Structures course.

University Press Club

Vice-President

Princeton, NJ

January 2013–January 2014

Led organization of undergraduate freelance journalists, writing for local and regional newspapers.

Languages, Technologies & Tools

Expert: JavaScript, Node.js, Express.js, React, Python, CSS, HTML

Proficient: Objective-C, OCaml, Java, C, C#, Git

Knowledgeable: Haskell, TypeScript, CoffeeScript, MongoDB, Elasticsearch, SQL

Addendum

My [personal website](#) contains links to the projects mentioned above (most of which are available on [GitHub](#)), as well as several others (usually of a more academic variety). It also hosts blog posts I've written on [server-side rendering with React](#), [Python implementations](#), [PhantomJS](#), and more, several of which have been featured on the front page of Hacker News, in Python Weekly, etc.