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Brian Z. Shi

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Education

University of Pennsylvania	**August 2013 – May 2017**

Pursuing **B.S.E.** and **M.S.E.** in **Computer Science**

Recent Coursework:

Internet and Web Systems (CIS 555)	*Machine Translation (CIS 526)*	*Analysis of Algorithms (CIS 502)*
Database & Info. Systems (CIS 550)	Networks and Security (CIS 331)	Stochastic Processes (STAT 433)
Artificial Intelligence (CIS 391)	Scalable & Cloud Computing (NETS 212)	*Italicized = graduate course*

Experience

Software Engineer Intern - *Uber Technologies Inc.* **Summer 2016**

- Will be a summer intern on the Growth team at Uber

Software Engineer Intern - *SumAll* **Summer 2015**

- Summer backend intern for SumAll, a data company that brings analytics, reporting, and business intelligence to social media platforms.
- Wrote RESTful backend microservices that synced together the company's streams of user data, with support for scalable distributed computing through database sharding. Technologies used include Dropwizard, Jersey, and Jackson for Java, Flask and Boto for Python, MongoDB, DynamoDB, Jenkins, and Docker

Teaching Assistant - *University of Pennsylvania* **August 2014 - Present**

- TA for CIS 121 ("Data Structures and Algorithms"), a third semester course in Penn's Computer Science sequence
- Duties include teaching weekly recitations, rewriting projects and homeworks, writing autograders, holding office hours, grading assignments and exams, and leading review sessions
- Projects include rewriting tools for statistics, writing the writeup, interfaces, solutions, and test cases for the coding homeworks and projects, and contributing to the vast autograding infrastructure written in Java and Python

Software Developer - *University of Pittsburgh Medical School* **May 2014 - Present**

- Developed and currently maintain pcnstesting.com, a web app used for making and administering exams to medical school students (see project below)

Other work: **Intern Developer** at *BudgetSimple*, **Developer** at *PennCycle*, **Research Intern** at *University of Pittsburgh*, and **Sales Consultant** at *Best Buy*

Projects

Search Engine – CIS 555 Final Project *Java, Scala (Spark)*

- Developed as a group project between 4 students, this search engine consisted of a distributed web crawler, inverted index engine, TD/IDF engine, PageRank engine, query engine, and a web interface.
- Big data computation mostly done in Apache Spark using EC2. Various indexes and crawl data stored in Dynamo.

Pennthoven – Solo Project *Python*

- A music composition application I am currently developing using machine learning in Python. The app essentially ports many of the prose and poetry generation NLP techniques into composing music.

PCNS Testing – Solo Contract Project *JavaScript (Backbone), PHP, PostgreSQL*

- A consulting project for Prof. Ira Bergman of the Univ. of Pittsburgh Medical School, PNCS Testing is an application built from scratch that allows for creating, editing, and administering comprehensive, situation-based tests to be taken online by med school students and residents. The app also has thorough score-reporting features.
- Deployed to pcnstesting.com. Went through months of beta-testing at Pitt before going live in July 2015.

Skills

Languages:	*Advanced:*	Java, Python, JavaScript		
	Proficient:	Shell, C/C++, SQL, PHP, HTML/CSS		
	Beginner:	Scala, Haskell, OCaml		
Frameworks/ Tools:	Apache (Server, Maven, Hadoop, Spark, Tomcat)		Flask	Django	Dropwizard
	AWS (EC2, S3, DynamoDB)		Node.js/Express	Backbone.js	
	Unix		Vim	Git	IntelliJ