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Levi Cai

Education

University of Pennsylvania *Philadelphia, PA* *Sept. 2008 to May 2012*

Bachelor of Science in Engineering in Computer Science, Minor in Mathematics, GPA: 3.35/4.0

Employment

MasterStreet Full-stack Engineer *New York, NY* *Fall 2013 to Present*

- Built search engine for professional development classes using Ruby on Rails, ElasticSearch, and AWS

IBM Software Engineer *RTP, NC* *2012 to Fall 2013*

- Developed server management mobile app using Dojo/Cordova/Javascript for iOS/BB/Android platforms

Teaching Assistant for Intro. to AI Course *Univ. of Pennsylvania* *Spring 2012*

- Created assignments, tests, and projects for grad-level course CIS521 (Intro. to Artificial Intelligence)

IBM Mobile Systems Software Development Intern *Summer 2011*

- Developed remote power control features for IBM Flex Systems on mobile devices using Dojo/REST/AJAX

CKBot Software Research Assistant *Univ. of Pennsylvania: GRASP Modlab* *Summer 2009 to 2012*

- Developed software for CKBots (Connector-Kinetic robots) in Python, C, OpenCV, CMUSphinx, and ROS

Comp. Neuroscience Researcher *Univ. of Pennsylvania: Rachleff Scholars* *Summer 2010*

- Developed simple spike train-based acoustic recognition program for low-power robots

Summer Mentorship Program: Instructor *Univ. of Pennsylvania: Engineering* *Summer 2009*

- Taught a full-time 6-week Intro. to Engineering/Robotics course for ten 11-12th graders

NSF Undergraduate Researcher in Robotics *Univ. of Colorado, Boulder: Intel. in Action Lab* *Summer 2007/2008*

- Optimized MATLAB code for the DARPA LAGR project (Learning Applied to Ground Robots)
- Individually designed and fabricated an entire robot platform for use in future lab research

Technical Experience

Projects

Distributed/Multi-threaded Search Engine *Java (Pastry DHT)* *Spring 2012*

- Developed a multi-threaded distributed indexer based on Mercator and information retrieval system based on the original Google paper for a generalized search engine (one of the fastest overall systems of 25 teams)

Sentiment Analysis of Paper Citations *Python, NLTK* *2011 to 2012*

- Senior design project to analyze sentiment and usage patterns for research paper citations
- Used common NLP tools such as regression, mutual information, etc. to model the 2007 Elsevier collection

Race Car Electrical/Software System *C, PIC, Eagle, and SolidWorks* *2008 to 2012*

- Designed and constructed the electrical system and made major contributions to the software system for a competitive Formula-style race car. Team placed 18th/108 at the 2011 Formula SAE competition.

Vision System for Soccer-Playing Robot *MATLAB/Mex and Lua* *2009 to 2012*

- Wrote scripts for object detection in vision tasks. Optimized search algorithms, detection rates, and testing. Placed 4th/24 at the 2010 International RoboCup Standard Platform League Competition.

Skills

Programming Languages Python, Ruby, Javascript, C, Java, HTML/CSS, MATLAB/MEX

Awards and Honors

Univ. of Pennsylvania Rachleff Scholar *Highly Selective Research Program* *2008 to 2012*
IBM T.J. Watson Scholarship Recipient *2008 to 2012*

Additional Activities and Highest Positions Held

General Assembly Data Science Course *Student* *Spring 2014*
IBM Extreme Blue Internship Program *Lead Technical Mentor* *Summer 2013*
FIRST Robotics Team 900 *Programming/Computer Vision Mentor* *2013*
Penn RoboCup *Vision Team Leader* *2009 to 2012*
Penn Formula SAE *Electrical Team Leader* *2008 to 2012*