Khoa Q.D. Tran

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EDUCATION

University of California, Berkeley — Fall 2012 - Present
Bachelor of Arts, Computer Science. In-major GPA: 3.50
Expected graduation date: December 2014

RELEVANT COURSEWORK

Data Structures	Algorithms	Database Systems	Discrete Math & Probability Theory
Machine Learning	Data Mining	Natural Language Processing	Computer Security & Networking
Operating Systems	*Financial Engineering*	*Computational Photography*	*Programming Languages & Compilers*

EXPERIENCE

Undergraduate Student Instructor — August 2014 - Present
UC Berkeley, EECS Department — Supervisor: Professor Anant Sahai

- Lead the development of the "virtual lab", a set of programming and simulation assignments in IPython
- Teach one weekly recitation section and (try to) inspire students with Discrete Math & Probability Theory

Research Apprentice — February 2014 - Present
UC Berkeley, Haas School of Business — Faculty Sponsor: Professor Heather Haveman

- Collect price, product, and public discourse data for the Bitcoin and vintage wine markets via web scraping
- Analyze and test hypotheses and models on the emergence of product categories

Intern - Distributed Computation on the Design Graph — June 2014 - August 2014
Autodesk, Inc. — Python, Golang, Luigi, Azkaban, Amazon S3/SQS, Cassandra, Word2vec

- Automated the Design Graph data pipeline using open source batch scheduler software
- Implemented a bag-of-features model to classify Inventor 3D CAD's designs
- Clustered high-dimensional design data and visualized them in 2D to better understand the clusters

Reader — January 2013 - May 2014
UC Berkeley, EECS Department — Supervisor: Professor Anant Sahai

- Graded weekly problem set and offered feedback to 600+ students in Discrete Math & Probability Theory
- Collaborated with TAs and other Readers to assist students in weekly office hour and on online discussion forum
- Wrote shell scripts, tutorials, and lab solutions to make grading faster and more efficient

Computer Science Intern — June 2013 - August 2013
Ocean Tomo, LLC — Python, Scala, Play 2, D3.js, scikit-learn, nltk

- Reduced time to perform a "conflict check" by 50% by implementing the Conflict System in Play Framework 2
- Created interactive visualizations and reports with D3.js using data extracted from an Access database
- Automated full-text patent scraping and applied text mining techniques to find similar patents
- Researched and experimented with natural language processing algorithms to enhance the Patent Ratings system

PERSONAL PROJECTS

bearRec - bearrec.herokuapp.com — Python, Flask, Pattern

- A service that allows Berkeley students to search for classes related to topics they are interested in

FTES - nbviewer.ipython.org/gist/kqdtran/d380a9b88b3affa7cfeb — IPython, Graph API

- Analyzes Facebook feeds to find similar posts and most popular topics with the Natural Language Toolkit

bCheck - bcheck.hp.af.cm — Python, Bottle, BeautifulSoup

- Real-time Berkeley's classroom enrollment information retrieval

TECHNICAL SKILLS

Languages

- *Most experienced with*: Python, Julia, Java, Scala, Matlab/Octave, Bash Scripting
- *Familiar with*: HTML, CSS, JavaScript, Go, C, C++, SML, Racket, R, SQL, LaTeX

Software

- *Operating Systems*: Ubuntu, Mac, Windows
- *Frameworks & Libraries*: Play 2, Flask, jQuery, D3.js, Hadoop, Python's Data Science toolbox
- *Other Tools*: Git, Heroku, Vagrant, Android, AWS, Cassandra, Visual Studio, Eclipse, IntelliJ, Emacs