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 — Beginning August 2014
EECS Department, UC Berkeley — Supervisor: Professor Anant Sahai

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

- Automate the Design Graph data pipeline using open source batch scheduler software
- Implement a bag-of-features model to classify Inventor 3D CAD's design parts

Research Apprentice — February 2014 - Present
Haas School of Business, UC Berkeley — 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 & models on the emergence and maturation of product categories

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

- Graded weekly problem sets for 500+ undergraduates and (tried to) inspire them with Discrete Mathematics
- 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

Virtual Labs — Python, Julia

- Develops simulation assignments to help students taking EECS70: Discrete Math & Probability Theory gain better intuition and understanding of the material

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. Final Project for the Applied Natural Language Processing class at UC Berkeley

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/Django, jQuery, D3.js, Hadoop, Cassandra, Python's Data Science toolbox
- *Other Tools*: Git, Heroku, Vagrant, Android, AWS, Visual Studio, Eclipse, IntelliJ, Emacs