Khoa Q.D. Tran

2508 Ridge Rd. Apt 3, Berkeley, CA 94709
khoatran@berkeley.edu - (831)402-3491
kqdtran.github.io - github.com/kqdtran

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
In Progress:	*Financial Engineering*	*Computational Photography*	*Programming Languages & Compilers*

EXPERIENCE

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

- Teach one biweekly recitation section and (try to) inspire students with Discrete Math & Probability Theory
- Lead the development of programming and simulation assignments in IPython, also known as "virtual labs"

Intern - Distributed Computation on the Design Graph — June 2014 - August 2014
Autodesk, Inc. — Manager: Mike Haley

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

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

- Collected price, product, and public discourse data for the Bitcoin and vintage wine markets via web scraping
- Analyzed and tested hypotheses and models on the emergence of product categories

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 — Supervisor: Dr. Matthew Beers

- 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.uc01.clc.af.cm — Python, Bottle, BeautifulSoup
- Real-time Berkeley's classroom enrollment information retrieval

TECHNICAL SKILLS

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

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