# Khoa Q.D. Tran

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## EDUCATION

**University of California, Berkeley** Fall 2012 - Present
Bachelor of Arts, Computer Science. Cumulative GPA: 3.57
Expected graduation date: May 2014

## RELEVANT COURSEWORK

| | | | |
|---|---|---|---|
| Data Structures | Discrete Mathematics | Database Systems | Probability & Risk Analysis for Engineers |
| Algorithms | Computer Networking | Artificial Intelligence | Applied Natural Language Processing |
| *Machine Learning* | *Data Mining* | *Computer Security* | *Combinatorics & Discrete Probability* |

## EXPERIENCE

**Computer Science Intern** June 2013 - August 2013
*Ocean Tomo, LLC*

- Reduced time to perform "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 patents scraping from USPTO and performed Text Mining on patents
- Researched and experimented with Natural Language Processing tools & algorithms to perform Latent Semantic Analysis on patents and enhance the Patent Ratings system

**Course Developer** June 2013 - August 2013
*EECS Department, UC Berkeley*

- Revised and expanded *CS70: Discrete Mathematics & Probability Theory*'s lecture notes with Professor Umesh Vazirani, focusing on Mathematical Induction and its applications in Computer Science

**Reader/Grader** February 2013 - August 2013
*EECS Department, UC Berkeley*

- Graded weekly problem sets for 400+ 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 Bash scripts and tutorials to make the grading task faster and more efficient

**Content Developer** April 2013 - May 2013
*Mathapedia Research Group, EECS Department, UC Berkeley*

- Built interactive contents for *EECS149: Intro to Embedded Systems* using LaTeX, Javascript, and MathJax

## 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

**bCheck** - bcheck.hp.af.cm Python, Bottle, BeautifulSoup, DataTables.js
- Real-time Berkeley enrollment information retriever with a list of courses that still have open seats

**FTES** - nbviewer.ipython.org/github/kqdtran/FTES/blob/master/ftes.ipynb NLTK, Graph API
- Facebook Topics Extraction System, including a mini search engine using the bag-of-words model with TFIDF weighting, as an IPython Notebook. Final Project for Applied NLP at UC Berkeley

**Plagis** Java
- Plagiarism detector that checks for similarities among homework submissions using the Edit Distance algorithm

## TECHNICAL SKILLS

**Languages**
- *Most experienced with* Python, Java
- *Familiar with* HTML, CSS, JavaScript, C/C++, Scala, Matlab, SQL, LaTeX, Bash Scripting
- *Learning* Ruby on Rails, R

**Software**
- *Operating Systems*: Unix/Linux, Mac OSX, Windows 7/XP
- *Frameworks & Libraries*: Play 2, Flask/Django, jQuery, D3.js, Python's Data Science toolkit
- *Other Tools*: Git, Heroku, AWS, Vagrant, Visual Studio, Eclipse, IntelliJ, Emacs