Cem Koç

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EDUCATION

University of California Berkeley

B.S. in Electrical Engineering and Computer Sciences *Expected May 2017 |GPA: 3.5*

- *Relevant Courses*: Deep Learning(Graduate), Computer Vision(Graduate), Machine Learning, Probability Theory, Operating Systems, Artificial Intelligence, Algorithms, Linear Algebra Theory, Statistics
- *Leadership & Awards*: Qualcomm QUEST Scholar 2014, Hackers@Berkeley officer

INDUSTRY & RESEARCH EXPERIENCE

Apple

Software Engineering Intern | Apple Maps (Special Projects Group) *June 2016 – September 2016*

- Worked on OSM basemap generation with millions of nodes, map-matched probe data and implemented quick geo-filtering and retrieval of data using map reduce. Worked on approximation of *NP-hard* routing problems with time constraints.
- Implemented state-of-the-art graph algorithms such as ILS and genetic algorithms to improve routing with sparse data.
- Created an automated machine learning framework to ingest probe data for traffic estimation, route cost/value optimization.

TubeMogul

Software Engineer Intern | Ads Machine Learning Team *June 2015 – September 2015*

- Developed a java framework to collect and process real-time bidding results of digital ads. Integrated into data pipeline.
- Processed peta-bytes of data to forecast how likely an ad will win a specific bidding ultimately giving a customer a chance to modify ad in the company platform to increase ad revenue.
- Created an auction simulator and dashboard to automate the process of collecting

Berkeley Artificial Intelligence Research (BAIR) Lab

Undergraduate Researcher | Machine Learning and Robotics (Adviser: Ron Fearing) *September 2015 – Present*

- Researching in Biomimetic Millisystems Lab on tactile sensing, mapping and machine learning.
- Working on VelociRoACH robotic platform with 6-DOF force/torque sensing shell attached.
- Working on control, tactile terrain classification, locomotion using inexpensive sensors. Working on implementation of deep neural networks, ensemble, boosted trees, PCA and computer vision algorithms to help aid robot learning, obstacle aversion.

StatNews Research Group

Undergraduate Researcher | Topical Modeling & NLP (Adviser: Laurent El Ghaoui) *January 2015 – September 2015*

- Worked on natural language processing, topical modeling of unstructured data and meaning extraction from text corpus.
- Implemented Sparse PCA, NMF, Word2Vec language models for fast model learning, implemented t-SNE for representation.

PUBLICATIONS & CONFERENCES

Autonomous Terrain Classification with Force-Torque Sensor Equipped Millirobot
Cem Koc*, Can Koc*, Brian Su*, Ron S. Fearing.
Presented at the Bay Area Robotics Symposium (BARS), 2016.

SOFTWARE PROJECTS

AnimeFaces| Deep learning, computer vision based automated tool to recognize faces in anime/cartoons.
Atlas | Landmark image recognition using Deep Learning & Machine Learning such as SVM, TFIDF and Clarifai APIs.
Osiris| Android based personal assistant that is completely offline. Using Twilio**,** Google APIs and Yelp.
Habito|Backend Django app that matches apartment listings with user preferences, simplified apartment hunting.
Fifteen Puzzle Solver| Map reduce program using Apache Spark™ to solve game trees on Amazon EC2

SKILLS & LANGUAGES

Computer Science: Java, Python, C, C++, MATLAB, Hadoop, Spark, Tensorflow, Caffe, Android, Unix
Foreign Languages: Turkish, English, French, Japanese (elementary)