

# Kang (Frank) Chen

Undergraduate Student  
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**Research Interest** I am primarily interested in computer vision, specifically image tracking & segmentation via neural network models. I hope to enhance our vision technology today to solve difficult problems

**Education** **University of California, Los Angeles** Spring 2017  
Computer Science B.S.  
GPA: 3.4/4.0

**Relevant Skills & Courses** C/C++, MATLAB, Octave, Python, Javascript, OCaml  
OpenCV, Mathematical Modeling, Algorithms, Data Structures

**Academic Experience** **Center for Vision, Cognition, Learning, & Art** March 2016 - present  
Undergraduate Researcher  
\* Research in causal relationships, fluent extraction, and causal learning  
\* Implemented detection + tracking modules in OpenCV for teaching robots to fold shirts  
\* Submitted paper to Neural Information Processing Systems (NIPS) conference

**Jet Propulsion Laboratory** June 2015 - June 2016  
Computer Vision Research Intern  
\* Spearheaded frame by frame tracking of IR multi-bandwidth images  
\* Achieved 90% accuracy in segmentation of images using neural network  
\* Published two papers at SPIE conferences

**Work Experience** **Workday** June 2016 - present  
Application Development Intern  
\* Implemented tax location mapping reports as part of Workday 28 product release  
\* Created get/put APIs for Workday Web Services  
\* Actively involved in Workday's agile development pipeline

**Taboola** March - June 2016  
Software Engineering Intern  
\* Implemented user authentication system using React.js and Node.js  
\* Built modules to communicate with Taboola Backstage API from scratch

## Daily Bruin

September 2014 - March 2016

Project Manager

- \* Spearheaded complete redesign of Spectrum, Daily Bruin's online Photo Blog
- \* Led a team to build an interactive web application for UCLA's dorm communities
- \* Presented workshops on Sublime Text + Git tools for incoming Daily Bruin staff

## Publications

### Cross-correlation and image alignment for multi-band IR sensors

Kang (Frank) Chen, Andrew Luong, Mallory Dewees, Xinyi Yan, Thomas Lu, Tien-Hsin Chao, Edward Chow, Gilbert Torres  
SPIE Optical Pattern Recognition XXVII 2016 | Baltimore, MA

### Intelligent multi-spectral IR image segmentation

Kang (Frank) Chen, Andrew Luong, Stephen Heim, Maharshi Patel, Thomas Lu, Tien-Hsin Chao, Edward Chow, Gilbert Torres  
SPIE Optical Pattern Recognition XXVIII 2016 | San Diego, MA

### Unsupervised learning of fluents from human demonstrations

Nishant Shukla, Yunzhong He, Kang (Frank) Chen, Song-chun Zhu  
Submitted to Neural Information Processing Systems (NIPS) 2016

## Honors and Awards

Upsilon Pi Epsilon Honor Society

March 2014 - present

Eta Kappa Nu Honor Society

March 2015 - present

Gerald P. Popek Scholarship in Computer Science

January 2016

Harley L. Woods Family Scholarship

January 2015

## Leadership

Resident Assistant

September 2015 - present

- \* Responsible for a floor of 90 residents in UCLA's residential dorms

IDEA Hacks Organizer

September 2015 - February 2016

- \* Sponsorship organizer for the largest hardware-focused hackathon in the West Coast

LA Hacks Organizer

January 2015 - present

- \* Operations organizer for the largest hackathon in the West Coast

Engineering Society of UCLA

September 2014 - June 2015

- \* External Vice President for the umbrella engineering club at UCLA

Bruin Entrepreneurs

September 2013 - June 2015

- \* Led student incubator program for UCLA's student entrepreneurs