Chet Corcos

INFO

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EDUCATION

University of Southern California

Masters in Computer Science
Los Angeles, CA
August 2015
GPA: 3.5

- Robotic Embedded Systems Lab (RESL)

Courses

- Machine Learning
- Probabilistic Graphical Models
- Advanced Analysis of Algorithms

Harvey Mudd College

Bachelor of Science in Engineering
Claremont, CA
May 2013
GPA: 3.7

- Dean's List: Spring 2010 - Spring 2013
- Tau Beta Pi: Engineering Honor Society
- Rank 5/78 in Engineering
- Norin Memorial Scholarship Recipient for Communications Engineering and Related Fields (SP 2012)

Courses

- Differential Equations
- Multivariable Calculus
- Linear Algrbra
- Special Relativity
- Elecromagnetism
- Continuum Mechanics
- Control Systems
- Microprocessor Design
- Communication Systems
- Numerical Methods

PUBLICATIONS

Towards Interactive Object Recognition: *Karol Hausman, Chet Corcos, Joerg Mueller, Fei Sha, Gaurav Sukhatme,* In IROS 2014 3rd Workshop on Robots in Clutter: Perception and Interaction in Clutter, 2014.

PROFESSIONAL

SpaceX

Avionics Intern
Hawthorne, CA
Summer 2013

- Designed pan-tilt control system for a custom laser scanning infrared range finder (LiDAR).
- Designed calibration and simulation rigs in CAD along with engineering drawings for machining and prototyped with 3D printing.

Aura Labs

Software Developer and Bio-signal Analyst
Tustin, CA
Summer 2012

- Developed an iPhone App involving Bluetooth communication and GPS tracking.
- Used frequency domain tools for heart beat detection from an infrared sensor.

RESEARCH

USC Robotic Embedded Systems Lab

PhD Candidate
Los Angeles, CA
Fall 2013 - Summer 2015

- Smoothing and Mapping (SAM) simulations with heterogeneous multi-robot teams.
- Probabilistic graphical model for robotic interactive object recognition.
- Deep learning library and tools for experimenting with nerual networks.

UC Davis Center for Neuroscience

intern
Davis, CA
Summer 2011

- Wrote MATLAB scripts using EEGLab toolbox for analyzing inter-cranial brain signals from rats and humans.

PROJECTS

Electric Truck Conversion

Fair Oaks, CA
Summer 2008

- Built an electric truck using the body, chassis and manual transmission of a 1999 S-10 with a blown engine.
- Installed power brakes, power steering, welded battery trays, designed 12V and 120V circuits.

High Power Rockets

Harvey Mudd College, CA
Fall 2010

- Built and flew high-powered rockets (I-motors) with custom sensor payload.
- Designed and built a protoboard with a data-logger, 3-directional gyroscopes, and 3-directional accelerometers.
- Developed a 6 DOF model in MATLAB for determining the rocket's 3D position and orientation throughout flight.

5C Menu iPhone App

December 2014

- Designed and built a Cordova iPhone app with Meteor.
- Displays the dining hall menus for the Claremont Colleges.

RSA Encryption Demo

February 2014

- Implemented RSA encrytion with Python.
- Created a demo that explains how RSA works.

Password Rhythm Authentication

Fall 2013

- An algorithm for authenticating users based on their typing rhythm.

Web Audio Guitar Tuner

January 2015

- Built a guitar tuner in your browser using the the Web Audio API.

D3 Network Visualization

October 2013

- Build a reactive Force Layout visualization with Meteor.
- Downloaded and visualized my facebook social graph.

Observable Streams Meteor Package

February 2015

- Implemented an observable streams library using Meteor's reactive library, Tracker.

OpenCV Eye Tracker

Spring 2011

- Built an eye tracker using OpenCV.

MIPS Multicycle Processor Implementation

Spring 2011

- Implemented a MIPS 8-bit processor in System Verilog on an FPGA.

Classic Car Restoration

2007-2010

- Restored a 1965 Chevrolet Malibu for my first car with my father.
- Restored a 1971 Chevrolet Blaze with my father during winter break.

SKILLS

- Python (Theano, Numpy, iPython)
- JavaScript (Meteor.js, Node.js, d3.js, React.js, Cordova, Coffeescript)
- MATLAB
- C
- C++ (OpenCV)
- CAD (NX 7.5, OpenSCAD)
- iOS (Objective-C, Swift)
- Lisp
- Prolog
- Java
- System Verilog
- 3D Printing
- Machine Shop