

# TOM JACOBS

Software developer, working on robots and deep learning.

## TECHNICAL SKILLS

*Languages:* Python, C, C++, Bash, JavaScript, HTML, CSS, Ruby, Objective-C.

*Tools:* TensorFlow, Keras, OpenCV, Make, ROS, Raspberry Pi, AWS, Linux, React, Rails.

## PROJECTS

**Betabot.** An autonomous mobile robot built for deep learning research.

<https://github.com/tjacobs/betabot>

- Developed a robot with 3D-printed body, microcontroller, Python, motors, and simulator.

**SF Rover.** A web controlled telepresence robot.

<https://youtube.com/watch?v=FPq7K7XTg3o>

- Developed a robot for users to experience San Francisco live from website, using an RC car, servos, video streaming software, and a 3G connection.

**First Person View (FPV) racing drones.**

<https://youtube.com/watch?v=KThrDFqO5wc>

- Built quadcopter drones from flight controllers, motors, cameras, and video transmitters.

**A decentralised P2P file system.**

<https://arxiv.org/abs/cs/0701190>

- Developed a decentralised internet storage system.

## EXPERIENCE

**HomeShare - Cofounder, CTO**

<https://thehomeshare.com> | San Francisco | 2016 – 2016

- Created the company with cofounder, developing a system to match compatible housemates.
- Hired and ran the engineering team, developing the rails web app and automated web systems.
- Deployed and managed the servers, bots, content, and site deployments.

**Kepler Analytics – CTO**

<https://kepleranalytics.com.au> | Melbourne | 2015 – 2016

- Developed the Kepler sensors, which detect smartphones and shoppers in retailers.
- Deployed the servers, data processing system, and remote sensor upgrade system.
- Developed product features such as heat map trilateration to visualize shopper locations.

**Expensify - Senior Software Engineer**

<https://expensify.com> | San Francisco | 2010 – 2014

- Created the mobile apps across four mobile platforms, writing a cross platform mobile app framework.
- Hired and ran the mobile development team, and grew with the company from four people to thirty.
- Worked on the Android app to get it featured in the Play Store, boosting app downloads by 100,000+.

**Red Swoosh - Software Engineer**

San Francisco | 2006 – 2008

- Co-wrote the Red Swoosh product, a P2P C++ file distribution client.
- Wrote Red Swoosh's BitTorrent implementation and created the world's first in-browser BitTorrent client.
- Upgraded the deployed P2P app client base of 100,000+ installs.

## EDUCATION

**Udacity – Self Driving Car Nanodegree**

In Progress

**Coursera/Stanford University Online – Machine Learning**

May 2017

**University of Melbourne – Bachelor of Computer Science (Honours)**

2002 - 2005

- Tutored Operating Systems and Introduction to Programming.