

# Jackie Kay

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github: jacquelinekay

## EDUCATION

**Swarthmore College**

**GPA: 3.6 (Computer Science: 3.83)**

Expected Graduation: May 2014

Computer Science Major, Double Minor in Engineering and Mathematics

**Relevant Coursework:** Fundamentals of Digital Systems, Data Structures and Algorithms, Mobile Robotics, Computer Vision, Theory of Computation, Natural Language Processing, Computer Architecture, Humanoid Robotics, Computer Networks, Artificial Intelligence

**Languages:** Proficient in C/C++, Python, Java, and Javascript.

## PROJECTS

### **Charcoal**

An open source C dialect for intuitive cooperative threading.

### **FaceLibs**

A natural language processing app for Facebook which replaces the names of characters in a work of fiction with the user's top friends.

### **OpenSwype**

An open source continuous stroke input ("Swype") keyboard for Android phones.

### **Camtango for Android**

An event-centric, location-aware photosharing application for Android.

### **Eigencats**

A computer vision system for feline facial recognition via principal component analysis and singular value decomposition.

### **Augmented Reality Dots and Boxes Game**

An augmented reality setup which projects a game board onto a real surface and utilizes computer vision to process drawing input, then provides visual feedback based on game rules. Image rectification was implemented via homographies and filtering, while classification was accomplished by normalized correlation.

## WORK EXPERIENCE

### **Summer Scholar, Carnegie Mellon Robotics Institute**

**Summer 2013**

Led a project on time-dependent, resource-constrained path planning for an autonomous planetary rover. Designed a C++ simulation modeling rover energy expenditure and thermal levels. Project expected to culminate in a research paper.

### **Mobile Robotics TA, Swarthmore College Engineering Department**

**Fall 2012**

Provided support for students in ROS, Linux usage, and robotics theory. Administered Git repositories for homework backup and submission.

### **Lead Android Developer, AgileZoom, LLC**

**Summer 2012**

Singlehandedly responsible for development and publication of all Android products for Agile-Zoom, Camtango and ici.

**Research Assistant, Swarthmore College Engineering Department Summer 2011**

Designed a utility for selecting and storing color profiles from a robots field of view to aid computer vision tasks. Coded data structures for occupancy grid mapping. Simulated wireless signal strength localization in MATLAB and C++.

HONORS AND AWARDS

**RISS REU 2013**

NSF research grant for undergraduates awarded by the Carnegie Mellon Robotics Institute.

**William Plumer Potter Fiction Award 2013**

Swarthmore Department of English Literature's prize for best student short story.

**Hurd Summer Research Fellowship 2011**

Competitive fellowship for undergraduate research in the sciences and engineering.

LEADERSHIP EXPERIENCE

**President, Women's Ultimate Frisbee Team 2013-2014**

Lead organizer of the Warmothers, Swarthmore's nationally ranked women's Ultimate Frisbee team.

**Resident Assistant, Swarthmore College Office of Residential Life 2012-2014**

Serves as a peer counselor and advisor to students in matters of residential life, safety and overall well-being. Acts as a liaison between students and college administration.