

Colleen Carroll

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EDUCATION

Princeton University *Princeton, NJ*
Computer Science, Bachelors of Science in Engineering

June 2014

EMPLOYMENT

NASA Ames Research Center *UX Researcher and Designer*

Sept 14 - present

Conduct user research and design tools for human space flight operations. Projects include web-based data analysis tools for manned missions to Mars and an augmented reality application for astronaut procedure execution. Specific research and design techniques employed are listed below. Part of NASA cooperative agreement with SJSU Research Foundation.

Google, Inc. *Software Engineering Intern*

Summer 2013

Conducted exploratory research into user experience improvements for the Setup Wizard team in Android. Implemented standalone app that exhibits theme sharing across applications. Collaborated with Android Settings team for Wi-Fi user interface improvements.

SecondMarket, Inc. *Software Engineering Intern*

Summer 2012

Worked on java web-application under continuous deployment. Developed and pushed to production a file uploader. Helped with code redesign on several features now in production. Developed extensive tests including unit, integration, and automated browser testing.

HIGHLIGHTED PROJECTS

Augmented Reality/Internet of Things Prototype for Astronaut Training *NASA HCI Group*

Spring 2017

Led the UX design team on a prototype designed to improve the efficiency of astronaut procedure execution while aboard spacecraft. The heads-up augmented reality display provides hands-free contextually relevant instructions to users while the internet-connected devices provide feedback about their own location and use. Full publication on methods and results are available here: <https://goo.gl/PPAbpM>

Gesture Glove *Human-Computer Interaction Course, Princeton U.*

Spring 2013

Designed and prototyped a glove that allows a user to perform tasks on their smartphone with hand gestures. Built using the Arduino platform. Videos and findings of the project posted here: <http://goo.gl/G4VtCx>

Automating Touch-Optimization *Undergraduate Research, Princeton U.*

Fall 2013

Assessment of technical feasibility and usability improvements of a browser plug-in to optimize web pages for touch interfaces. Study included implementation of a new interface for common web-page elements and user studies on this interface, including qualitative observations and quantitative measurements of usability.

TOOLS AND SKILLS

Research: Contextual inquiry, Card sorting, Affinity diagramming, Workflow modeling, Sequence diagramming, Cultural modeling, Physical environment modeling, Personas

Design: Brainstorming, Paper prototyping, Wireframing, Web mockups, Interactive prototypes, Usability testing, Storyboarding, Speed dating, Information hierarchy, Invision, Balsamiq, Sketch, Omnigraffle

Technical: Javascript, Arduino, Raspberry Pi, React, Redux, Python, jQuery, Angular, Android, Java, SQL