

Experienced software and hardware engineer interested in investigating the use of existing devices in novel ways for ubiquitous computing, assistive technologies and to improve education. My inspiration comes from the hope to someday use my technical skills to help people in the developing world.

## EDUCATION

**Carnegie Mellon University**, Human Computer Interaction Institute  
Masters of Educational Technology and Applied Learning Science GPA: 3.74

Pittsburgh, PA  
Aug 2015

**National Institute of Technology**, Karnataka  
Bachelor of Technology in Mechanical Engineering GPA: 3.2

Karnataka, IN  
May 2011

## EXPERIENCE

Senior Web Developer, Carnegie Mellon University

July 2015 – present

- Building and maintaining Educational Technology to improve online learning
- Prototyping low cost video recording system for teaching courses
- *Advisor*: Prof Geoff Gordon

Research Assistant, Carnegie Mellon University

Aug 2014 - present

- *Focus*: Wearables, HealthCare, Assistive Tech, Ubiquitous Computing,
- *Advisor*: Prof. Jen Mankoff
  - *Watch-Ya-Doin*: An innovative experienced based sampling framework for longitudinal data collection and analysis. Our system consists of a smartwatch and an android device working unobtrusively to track data so sample applications are in healthcare and assistive technology
    - Longitudinal Eating Detection: Tested and deployed the system to users in the field with a publication for UbiComp (*to submit*)
    - Longitudinal Prosthetic Usage: Using wearable technology to track long term prosthetic with the nonprofit E-Nable. Aiming for Assets 2017
  - *Twist n Knock*: A One-Handed Gesture for smart watches: GI 2016
  - *EDigs*: Built and maintained the APIs for apartment hunting website in Pittsburgh. Implemented Log linear regression for utility estimates: CHI 2017 (*in submission*)

Web Architect, TeliportMe Inc: US funded Indian Startup

Jul 2011- Aug 2014  
(3 years)

- Engineered APIs for Android, iOS, Web and Google Glass
- Helped grow product to 4 million users and 100K locations
- Designed 3D viewer in par with Google street view
- Managed 10 Ubuntu machines with MySQL and Redis replication

## PUBLICATIONS

- P5 **Cannanure V.K.**, Zakaria, C., Thomaz E., Mankoff J. 2016. “Field Ready Eating?”, Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing, UbiComp 2017 (*To submit*)
- P4 Onafuwa, D., Early, K., Kohanteb, O., Vyas N, **Cannanure V.K.**, Ramkrishnan V., Fienberg S, Mankoff J., 2016. “Understanding the Information Needs of Prospective Tenants”, In Proceedings of the 32nd Annual SIGCHI Conference on Human Factors in Computing Systems. CHI 2017 (*in review*)
- P3 **Cannanure V.K.**, Chen, X., Mankoff J., 2016. “Twist and Knock A One-Handed Gesture for Smart Watches”, 2016 Proceedings of the 42nd Graphics Interface Conference 2016

- P2 **Cannanure V.K.**, Ramaswamy N, Karanth N, Desai V, Kulkarni S.M., 2011 "Development of an Automated Handwriting Analysis System", ARPN Journal of Engineering and Applied Sciences vol 6. No. 9, Sept 2011
- P1 Ramaswamy N, **Cannanure V.K.**, Karanth N, Desai V, Kulkarni S.M., 2011 "The Effect of Deviation in Nozzle Diameter on the Pressure Loss Coefficients of Diffuser in a Valveless Micropump", International Journal of Electronics and Computers, published by International Science Press, Vol. 3, No. 1 Jan.-June 2011

## POSTERS AND DEMOS

- D2 **Cannanure V.K.**, Gordon G. 2017. "*TelKart and QnA: An Open Teaching System for Computer Science Courses*", Open Education Global Conference 2017, OEC 2017, Cape Town South Africa (To present)
- *Working on a journal paper as an addendum to Open Praxis 2017*
- D1 **Cannanure V.K.**, Mankoff J., 2016. "*Watch-Ya-Doin*", 2nd Integrative Conference on Technology, Social Media, and Behavioral Health 2017, November 2016, Pittsburgh PA

## SELECTED PRESS

**TheBetterIndia:** "How a National Level Cyclist Is Fighting Both Spinal Injury & Poverty with Inspiring Confidence"

**Milaap Blog:** "Getting Back to Cycling: A National Medalist's Dream"

**CMU:** "A new online resource from Carnegie Mellon University seeks to help people find the perfect rental"

**HCI:** "EDigs Helps Apartment Hunters Find the Perfect Rental"

**The Next Web:** "TeliportMe introduces 3D effects to its 360-degree panoramic app for Android"

**Techcrunch:** "Test Flighting: Aplover Launches Free, Crowdsourced Testing Platform For Android Apps"

**Robert Scoble:** "Developers: crowd-source your testing of Android phones"

## SERVICE

- Product Architect, Kannada Baruthe: Non-Profit July 2015 - Present
- A non-profit to help people learn a second language with over 50,000 users
  - Revamped Web, Android and iOS app to improve learning
  - Conduct weekly experiments to improve engagement and learning
- Teaching Assistant, Software Structure for User Interfaces Fall 2014
- Helped grade assignments and homework for over 50 students
  - Supervised by Prof Jen Mankoff
- System Administrator, NITK Surathkal Fall 2010 - 2011
- Built a custom OS based on Linux mint
  - Setup and managed 20 Ubuntu machines with custom OS
- Web Developer, Freelancer (during undergrad) Jul 2010 - Jul 2011
- Built cross-platform apps in web, Facebook, desktop and mobile
  - Provided solutions for startups, lawyers, artists, faculty and students
  - Worked on over 20 projects in Python, PHP and mobile applications

## TECHNICAL SKILLS

### Relevant Coursework:

Applied Fabrication, Applied Machine Learning, Data Pipeline, Gadgets Activity and Recognition in HCI, Education Goals, E-Learning Design Principles, Game Design Studio, Design of Educational Games

### Programming:

Python, PHP, HTML/CSS, JavaScript, Android, Arduino, iOS

### Technologies:

Scipy, Scikit, Weka, Numpy, AngularJS, Three.js, Bootstrap, MySQL, MongoDB, Redis, WebSockets

## OTHER ACTIVITIES

- Philanthropy: I have raised ~\$7000 for charity in 2016 for various causes in India
- Android Development: I have deployed 3 apps to the app store and have around 10,000 active users
- Web Development: I have deployed over 20 websites using Python, PHP and Flask
- Startups: I consult 2 technical startups primarily in web and mobile domain
- Swimming: I enjoy long distance swimming and have completed the Micheal Phelps 10k challenge

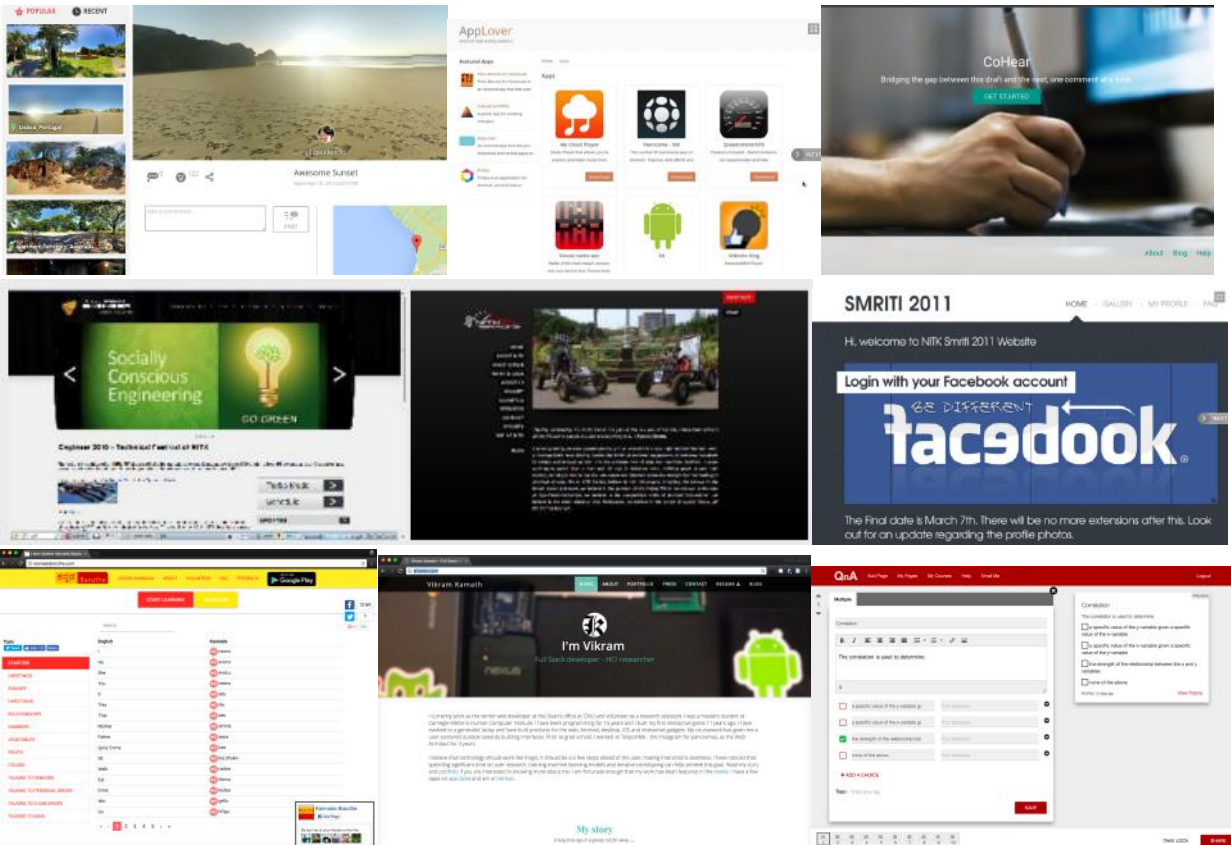
## PORTFOLIO

**Philanthropy:** I have raised ~\$7000 for charity in 2016 for various causes in India

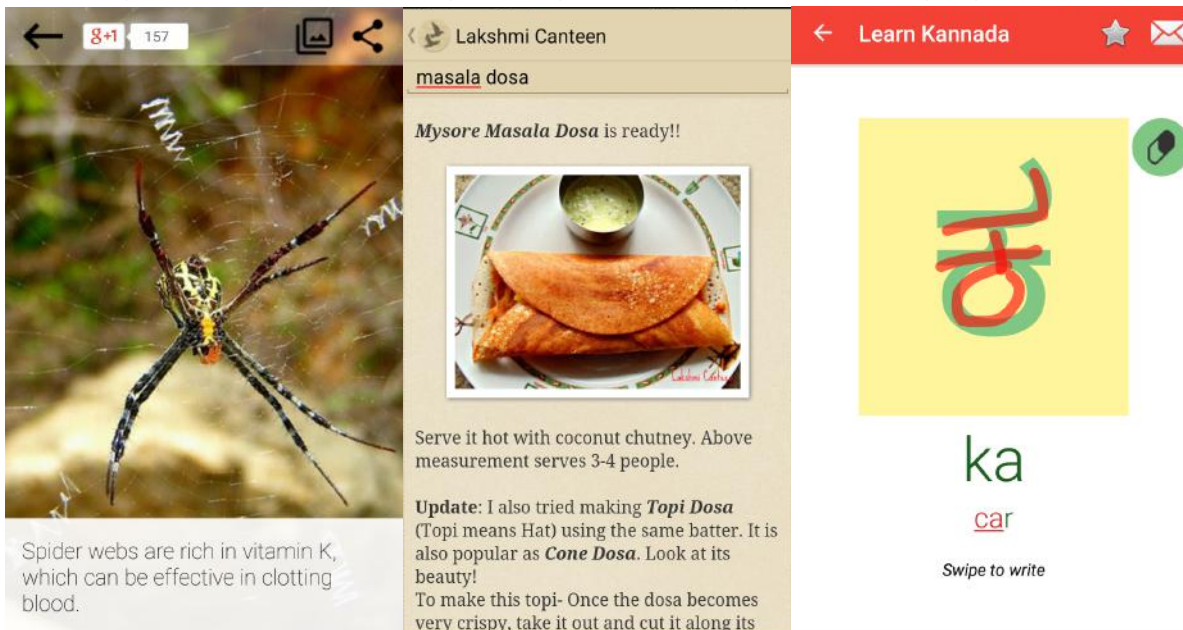


- SoulFree:** Swam 5k in Swim Miami 2016 to raise ~\$2000 to help buy 13 wheelchairs for quadriplegics.
- Rakum:** Teamed with my dad and raised ~\$3000 to feed 33 blind children for a year.
- Shaheera:** Helped an injured athlete get back on her feet by raising ~\$2000 through crowd funding.

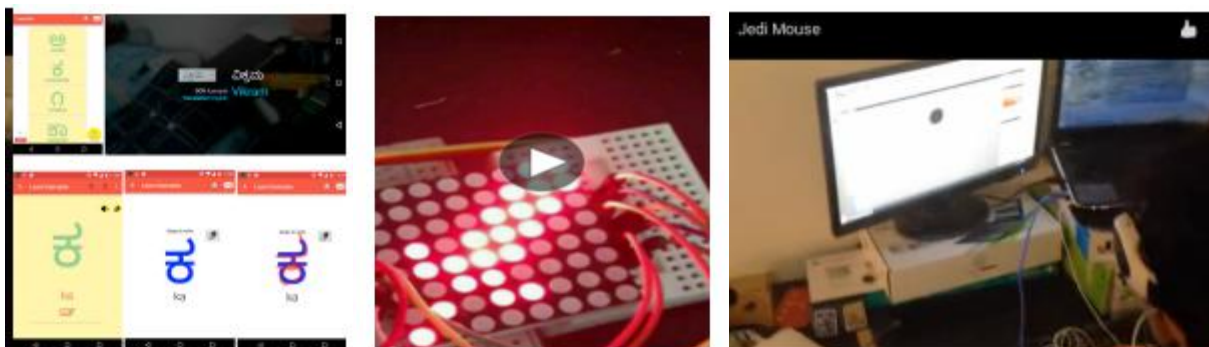
**WEB:** I have developed around 50 websites since 2010, some of them are in production. We get a daily visit of 1000 hits on our non-profit Kannada Baruthe. Some of my WebGL work at TeliportMe and a project AppLover has been featured on the press.



**ANDROID:** I have a few apps on the PlayStore with 50,000 downloads, my applications are geared towards promoting animal welfare, teaching cooking and teaching a second language.



**GADGETS:** I have worked on AR on Android, programmed a small LED game and my favorite project was a low-cost thought controlled mouse.



**WEARABLES:** I have worked on *Watch-Ya-Doin* and *Twist 'n' Knock*



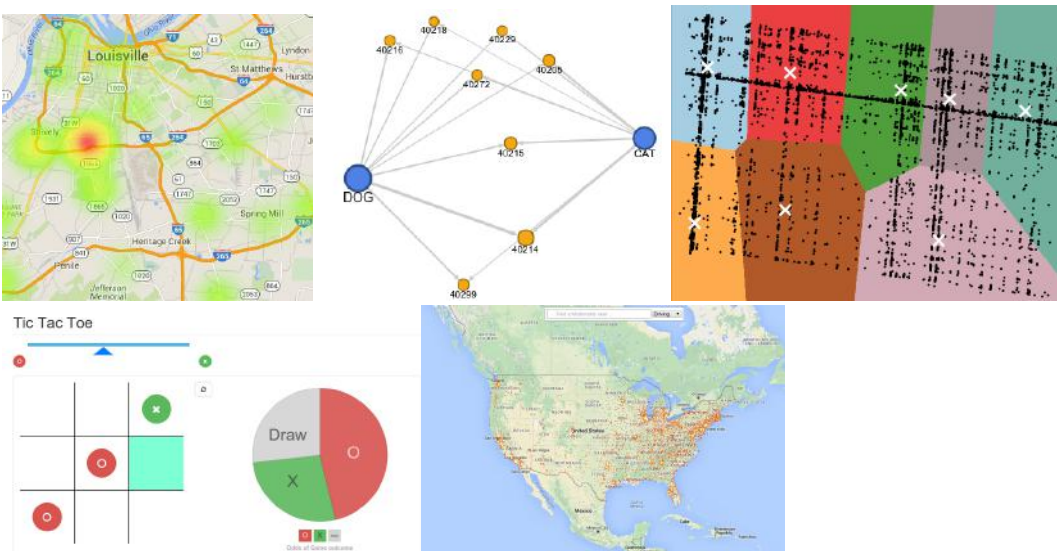
**3D PRINTING:** I built the 3D printer based on a kit. I know 3D modeling on Fusion360 and have worked with a team to build a custom prosthetic holder.



**FABRICATION:** I have exposure to laser cutting paper and acrylic and worked on PCB fabrication.



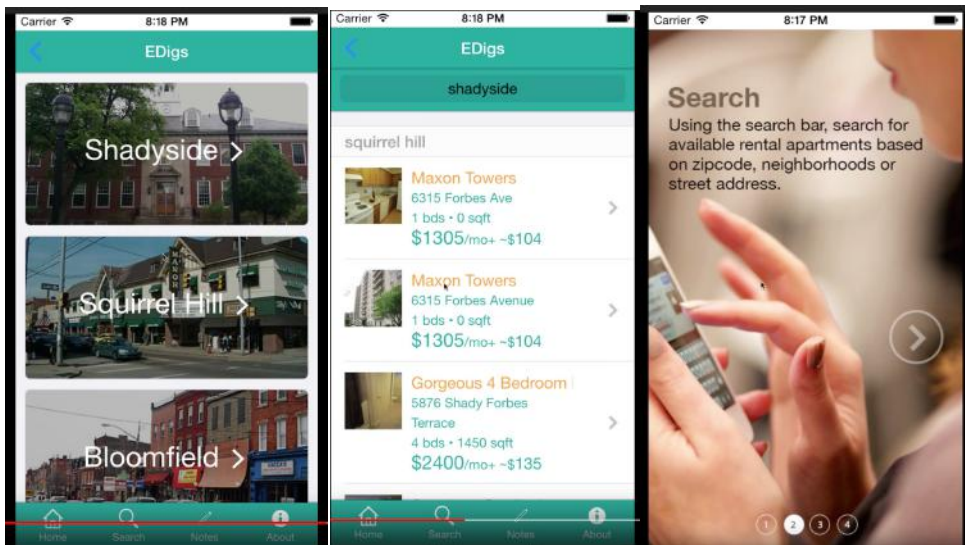
**VISUALIZATIONS:** Class projects and personal visualizations. My favorite being a real-time tic tac toe probability visualization as a see-saw.



**OPEN SOURCE:** I have developed a custom operating system based on Ubuntu. We deployed the OS to 20 machines and managed it via SSH for 2 years. I also worked on building a derivate of Ubuntu called EngiNux for a technical event which had 5000 participants.



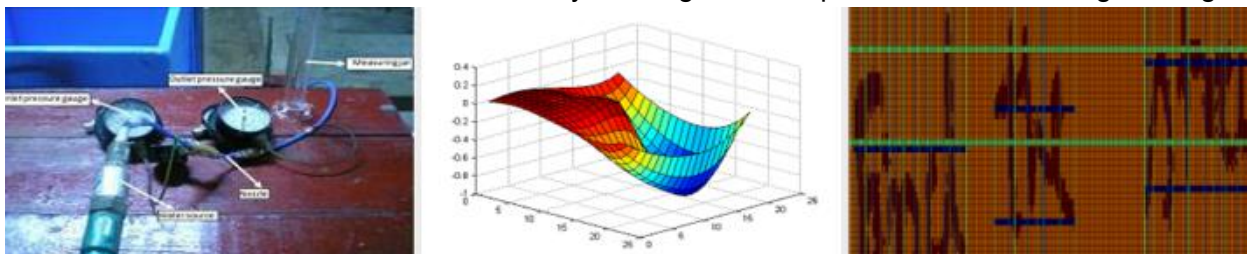
**IOS:** A web view iOS apps that was deployed on the app store.



**OLDER PROJECTS:** I started programming by building games



**OLDER PAPERS:** I ventured into science by working on small publications in the engineering domain



**ART:** I enjoy sketching TV characters

