SWATHI G. NAYAK

4410 Locust Street, Unit 3, Philadelphia, PA 19104 | (267) 746-4896 | nswathi@seas.upenn.edu
www.swathinayak.com

EDUCATION

MS in Embedded Systems, May 2017
University of Pennsylvania
BE in Instrumentation Technology, 2010-2014
B.M.S College of Engineering, Bangalore, India

SKILLS

Programming - Android, C, CAPL, Java, Python, HTML
Tools – CANoe, CANalyser, MATLAB, LabVIEW
HW – Arduino, Raspberry Pi, mbed, RF tech
Management – Supply chain, Market research

PATENTS

Application Number 62/347,321 - 'Improved Expression of Breast Milk via Automated System and Method for Managing Pumped Breast Milk', filed on 8 Jun 2016.
Application Number 4477/CHE/2013 - 'Panic detection device and methods thereof'.
Application Number 3911/CHE/2013 - 'A method and system to find precision on key from a plurality of keys for a lock',

CONFERENCE PAPERS

- **Swathi Nayak,** Kishore Kumar, 'Smart Stick for the Visually Impaired', AET-2014 Organizers, ISBN: 978-981-09-5247- 1, pp 183-191
- Namratha SN, **Swathi N**, 'Embedded Web Server for WSN', ICCSE-2012.

WORK EXPERIENCE

Co-founder & CIO at Keriton **Feb – Aug 2016**

- Co-founded a start-up [evaluated at $1.2m], in charge of writing business plan, product development, beta release, fund raising, supply chain management, market research and hiring.
- Designing an IoT-based "Pumped Breast Milk" management solution for hospitals.

Teaching Assistant, University of Pennsylvania **Jan – May 2016**
Tutored Penn Engineering Undergraduate course titled "Medical Device".

Software Engineer, Delphi Automotive System, Active safety Business unit **Jul 2014 – Jul 2015**
Generated test cases and wrote C libraries for Medium range radar and Vision based ECU for cruise control.

Research Intern, Indian Institute of Science(IISc), Department of Aerospace Engineering **Jun – Aug 2012**

- Integrated an 8-channel data acquisition system using LabVIEW.
- Built synthetic inductor and charge amplifier for vibration control in Aeronautic applications.

PROJECTS

Distributed chat system – Designed a reliable, dynamic, multithreaded UDP based distributed chat system in C++ using Socket API allowing arbitrary size groups to send and receive message in real time. Features like leader election, encrypted chat messages, totally ordered messages, zero duplication were implemented.

Electronic Voting system - Designed and implemented a voting system using TCP and UDP protocol. It allows the voters to vote for a registered candidate using client-server communication.

Modelling of a processor Pipeline with implementation of Branch prediction and caches –Wrote a Java program to manage data hazards and branch predictors; as well as to model cache function.

Programming 'PUMA', a light painting robot – Found a solution for inverse kinematics of a PUMA robot and wrote a MATLAB program to draw a desired picture using light and long exposure photography.

'EmotiLearn' – Designed an assistive kit and game to provide a visually interactive platform, conditioning the child with Autism with repeated visuals to help adapt to scenarios which are encountered on a daily basis.