

# Yiming (Eamon) Peng

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## EDUCATION

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**University of Massachusetts Amherst**, Amherst, MA Sept. 2013 - Dec. 2015  
M.S. in Computer Engineering  
Overall GPA: Available upon request  
**Wuhan University of Technology**, Wuhan, China Sept. 2009 - Jun. 2013  
B.S. in Communication Engineering  
Overall GPA: Available upon request, Rank: 2/30  
Minor in Statistics

## WORK EXPERIENCE

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- 5G Mobile Evolution Lab**, *Android Developer*, Amherst, MA Dec. 2013 - May. 2014
- Resolved the issue of the communication difficulty in emergency situations without Internet using wireless technology
  - Developed an Android application that enables the emergency responders to establish an ad hoc network among mobile devices of the emergency system
- Wuhan Engineering Automation Co., Ltd.**, *Intern*, Wuhan, China Jun. 2012 - Sept. 2012
- Worked at the R & D team
- Wuhan University of Technology**, *Teaching Assistant*, Wuhan, China Sept. 2011 - Jun. 2013
- Provided professional instruction to assist students in their academic courses' assignments and projects
- Wuhan University of Technology**, *Research Assistant*, Wuhan, China Jul. 2011 - Aug. 2012
- Worked at Image Processing Group and Xilinx-WUT Joint Lab
- Luculent Software Co., Ltd.**, *Intern*, Nanjing, China Jun. 2011 - Aug. 2011
- Resolved the issue of the devices deploy for the monitoring on the combustible poisonous gas in urban subterranean room

## RESEARCH AND PROJECT EXPERIENCE

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- Android Project - RunTracker**, Independent Course Work, *Big Nerd Ranch*
- Developed an Android application that works with a device's GPS to record and display the user's travels ([Link: https://github.com/Eamon4213/RunTracker](https://github.com/Eamon4213/RunTracker))
  - Built local databases to store data of user's running activities and their locations using SQLite
  - Utilized Google Map API to display a map showing the track of the user's running activities
  - Provided a smooth user experience by using Loader API to keep database work on a background thread
- Operating System Project - System Software Design**, *UMass Amherst* Spring 2015
- Implemented a concurrent program to schedule disk I/Os for multiple threads in SSTF(Shortest Seek Time First) order by using the Mesa-monitor and the thread library provided
  - Designed a user-level thread library to support multiple threads within a single Linux process and all the thread functions
  - Implemented an external pager to emulate how the OS handles address space creation/destruction, read/write faults, and argument passing between spaces in an application

- Implemented the clock algorithm to age physical pages and handle eviction for page replacement

### **Natural Language Processing Project - NER Tagging for Twitter, UMass Amherst**

Fall 2014

- Constructed an NER(Name Entity Recognition) tagger for Twitter to recognize spans of text that correspond to a name in tokenized tweets
- Utilized the CRFsuite software package and the IOB notation to do model training and label predicting on the corpus
- Developed a feature extractor in Python to extract the characteristics of words, including lexical, character affix, shape features, positional offset versions
- Optimized **F-score**(a statistics method to evaluate the accuracy of label predictions) from 0.036 to **0.475** for the initial labeled corpus, **0.362** for the unlabeled tweets on Kaggle.com (Link: <https://www.kaggle.com/eamonx/results>)

### **Network Security Project - Security in Emergency Situations, UMass Amherst**

Fall 2013

- Designed a client-server security system for emergency situations that supports access control, user authority allocation, communication encryption (Link: <https://github.com/Eamon4213/SecureRescue>)
- Developed the client app in Android that supports account registration and login, allows users to post POIs(Points of Interest) to server. When server sends a message, the client app is able to receive it, display it and notify the user
- Implemented Kerberos Algorithm in the data communication and used MD5 Salt Encryption in the user account protection

### **Computer Network Project - Urban Search and Rescue, UMass Amherst**

Fall 2013

- Developed a disaster management system to assist emergency responders to search and rescue in emergency situations

### **FPGA based Electric Vehicle Charging Pile, WUT**

Nov. 2011 - May. 2012

- Prepared for the 5th Annual National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction
- As the vice leader of the group, responsible for the program planning and the pre-function design and simulation

### **Signal Transmission & Processing System based on FPGA, WUT**

Sept. 2011 - Aug. 2012

- Xilinx-WUT Joint Lab Project
- Implemented MSK modulation communication system based on Turbo codes using Simulink

### **Video Capture & Image Processing System based on Animal Behavior Monitoring, WUT Jul. 2011 - Dec. 2011**

- Image Processing Group Project
- Implemented face recognition and target recognition for multi-frame image using Matlab

## **EXTRACURRICULAR ACTIVITIES**

### **W.E.B. Du Bois Library Learning Resource Center, Chinese Tutor, Amherst, MA**

Feb. 2015

- Provided professional instruction to assist students in learning Chinese language

### **Outdoor Test of DIORAMMA, Active Volunteer, Amherst, MA**

Oct. 2013

- Participated the outdoor test of a project research sponsored by NIH(National Institutes of Health), titled "Mass Casualty Management System(DIORAMA-II)"

### **Guinness World Record for Fresh Fruit Salad, Active Volunteer, Amherst, MA**

Sept. 2013

- UMass Dining created the World's Largest Fresh Fruit Salad at 15,000 pounds and set a new record as recognized by Guinness World Records
- Participated in World's Largest Fresh Fruit Salad cooking on Labor Day

**FiberHome Technologies Group Tech Talk**, *Active Member*, Wuhan, China

May. 2012

- Selected as student representative to Optics Valley Tech Talk and visited FiberHome Technologies Group

**Nandasoft Talent Centre**, *Active Member*, Nanjing, China

Aug. 2011

- Actively took part in lessons on Information Technology Outsourcing(ITO) skills training

**Summer Social Practice**, *Active Member*, Nanjing, China

Jul. 2011

- Selected as student representative to a one-month Summer Social Practice, visited Ericsson Panda Communication Co., Ltd. and several start-ups
- Actively took part in general meetings, tech talks and networking events

**Youth Website(Link: [www.wutyouth.net](http://www.wutyouth.net))**, *Active Member*, Wuhan, China

Sept. 2009 - Mar. 2010

- Actively took part in general meetings and networking events

## RELEVANT COURSEWORK

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University of Massachusetts Amherst

- ECE671 : Computer Networks
- ECE644 : Trustworthy Computing
- ECE665 : Algorithms
- CS683 : Artificial Intelligence
- CS585 : Introduction to Natural Language Processing
- ECE603 : Probability & Random Process
- ECE570 : System Software Design

Wuhan University of Technology, School of Information Engineering

- Information Theory & Coding
- Signal & System
- Communication Principle
- Electromagnetic Field & Electromagnetic Wave
- Analogous Electronic Technology
- Digital Signal Processing
- High-frequency Electronic Circuit

Wuhan University of Technology, School of Science

- Mathematical Analysis
- Higher Algebra and Geometry

## TECHNICAL SKILLS AND QUALIFICATIONS

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**Computer Languages**

Java(*Proficient*), Python, C, C++; Matlab, R; HTML, CSS; XML

**Software Develop**

Eclipse(ADT, PyDev), Android Studio, GDB, Sublime Text; Git; VirtualBox

**Circuit Simulation**

Proteus, Multisim, Protel, Keil

**Operating System**

Android, Ubuntu, Mac OS, Windows

## HONORS AND CERTIFICATIONS

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- 2011 Top Tier Fellowship Student of Wuhan University of Technology Oct. 2012
- 2011 Excellent Student Cadre of Wuhan University of Technology Oct. 2012
- Third Prize in the 11th "Innovation Cup" Student Tech Festival from WUT Dec. 2011
- Third Prize in Summer Social Practice from WUT Nov. 2011
- Third Prize in the 4th Electronic Design Contest from Electric & Electronic Innovation Center Jun. 2011
- Certification of C Programming from National Education Examinations Authority(NEEA) Mar. 2011
- Second Prize in the 9th Science Festival from WUT School of Science Apr. 2010