Wei Fu

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EDUCATION

PhD. ECE North Carolina State University   Aug, 2013 - Present
GPA:3.84/4.0
Visiting Student.Tsinghua University   May, 2012 - Mar, 2013

MS. EE Beijing University of Posts and Telecomm   Sep, 2009 - Apr, 2012
Overall GPA: 83/100, Major GPA: 86/100.
BS. EE Nanjing University of Technology   Sep, 2005 - Jun, 2009
Overall GPA: 88/100, Major GPA: 90/100, Ranking: 5%.

EXPERIENCE

Transfer Learning in Software Engineering   Sep, 2014 - present
Research, North Carolina State University, USA

- **Description**: The goal of the research is to enable software engineers to find software development best practices from past empirical data. Using data from real software projects, the project will determine and validate best practices in three areas: predicting software development effort; isolating software detects; effective code inspection practices.

- **Technique**: Data Mining, Machine Learning(Scikit Learn)

- **Development Language**: Python

P2P File Sharing System   Feb, 2014 - Apr, 2014
Course Project, North Carolina State University, USA

- **Description**: Implemented a simple Peer-to-Peer system with a centralized index, in which a concurrent server that is capable of carrying out communicatioin with multiple clinets simultaneously maintains the peer and files lists accrodingly when peers join and leave randomly. When peers join in this P2P system, they can add the local file names to file list in the server, and download files from some destination peer over TCP protocol after looking up specific files from the server.

- **Technique**: P2P, TCP, Socket Programming

- **Development Language**: Python

Go-back-N ARQ Scheme Simulation   Mar, 2014 - Apr, 2014
Course Project, North Carolina State University, USA

- **Description**: Implemented the Go-back-N automatic repeat request scheme and carry out a number of experiments to evaluate its performance. Specifically, encapsulate application data into transport layer segments by including transport hearders, bufferfing and manage data received from , or to be delieverd to, the applciation using UDP socket interface; adjust the window size at the sender, and compute checksums.

- **Technique**: UDP, Go-Back-N, Socket Programming

- **Development Language**: Python

Queueing System Simulation   Mar, 2014 - Apr, 2014
Course Project, North Carolina State University, USA

- **Description:**
  - Simulated the single server queueing system and multiple server queueing with scheduling polices system, like M/M/1, M/M/3/K, and others

- Simulated more generalized queueing sytems with general service time distribution such as "hevy-tailed" and "hyper-exponential" distributions and evaluate the corresponding system perfomance
- **Technique:** Queueing theory, Discrete-event Simulation Method
- **Development Language**: **C++**

CSMA/CD and Routing Algorithm Simulation　　　　　Oct, 2013 - Dec, 2013
Course Project, North Carolina State University, USA

- **Description**
  - Implemented a CSMA/CD based medium access control scheme and allowed the communications among some terminals.
  - Implemented the OSPF routing algorithm in the above communication network to route the traffic among different networks.
- **Technique:** CSMA/CD algorithm, OSPF routing protocol, Descrete-event Simulation Method
- **Development Language:** Matlab

Wireless Communication Research　　　　　　　　　　　May, 2012 - Mar, 2013
Research Assistant, Tsinghua University, China

- Designed a null-space based robust interference avoiding strategy for D2D communication and verified theoretial results with Matlab simulation.
- Investigated interference issues in small-cell communicaiton networks.
- Published one paper and completed one patent

Standards Research on Relay in LTE-Advanced System　　　Mar, 2011 - Oct, 2011
Intern, China Unicom Design Institute co., LTD, China

- Conducted independent research into the relay technology of a network physical layer, principally on the performance analysis of a relay network combined with network coding.
- Completed the relevant simulation of the algorithms proposed by co-workers.

Intelligent Patrol Monitoring System　　　　　　　　　　Mar, 2010 - Dec, 2010
Leader, Beijing University of Posts and Telecommunications, China

- **Description:**
  - Designed the big picture and structure of this B/S system.
  - Designed and developed **map display** module to display the real-time or previous positions of GPS terminals and implement other geographical operations for users in this system.
  - Designed and developed **server push** module whichh is responsible for automatically transmitting the data received from GPS terminals to client PCs that logged in this sytem.
  - Designed and developed **communication** package to send and receive data between the GPS terminals and the system server by SMS service and GPRS network.
- **Technique:** ASP.NET, Ajax, Database, Google Map API, Cellular Network Communication
- **Development Langauge:** C#, JAVASCRIPT, HTML, SQL

SMS Based Remote Control System　　　　　　　　　　　Mar, 2009 - Jun, 2009
Nanjing University of Technology, China

- Designed the system structure and welded all the chips and components.
- Written the remote control function codes with C language.

SKILLS & COURSES

Programming	C++, Python, C#, Java, ASP.NET, JavaScript, HTML, Ajax
	SQL, Google Maps API, Bootstrap, Grunt
Operating System	Windows, Linux, Mac OS X
Related Courses	Computer Networks, Internet Protocol, Algorithm, Opertaing System, Statistics
	Software Engineering, Search-based SE, Advanced SE, Computer Modeling
	Database System, Objective-Oriented Porgramming

HONORS AND ACHIEVEMENTS

One paper publised in IEEE WCNC, *Shanghai*	2013
One patent submitted and under reviewed, *Beijing*	2012
The first prize scholarship, *BUPT*	2011
The second prize scholarship, *BUPT*	2010
The third prize scholarship, *BUPT*	2009
The best undergraduate honors thesis, *NJUT*	2009
National scholarship for encouragement, *NJUT*	2008
The first prize scholarship, *NJUT*	2008
Outstanding undergraduate student, *NJUT*	2008
An active participant in summer social practice, *NJUT*	2007
Outstanding student leader, *NJUT*	2007
The second prize scholarship, *twice, NJUT*	2007
Jiangsu province government scholarship, *NJUT*	2007
The second prize scholarship, *twice, NJUT*	2006
Outstanding volunteer for the tenth national sports meeting, *Jiangsu province*	2005

PUBLICATION

- W. Fu, R. C. Yao, F. Gao, J.C.F. Li, and M. Lei, "Robust Null-Space Based Interference Avoiding Scheme for D2D Communication Underlaying Cellular Networks," *IEEE WCNC*, Shanghai, China, Apr. 2013.

- X. Wang, C. W. Yuan, W. Fu, "A Semi-anonymous Non-contact Offline Mobile Payment Protocol based on Concurrent Signature," *ICMAM*, Hongkong, China, Dec. 2011.

- W. Fu, "SMS and Single-Chip Microcomputer Based Remote Control Function Implement," Jun.2009, Nanjing, undergraduate honors thesis.

PATENT

- F. Gao, W. Fu, J.C.F. Li, and M. Lei, "Null-space Based Robust Interference Mitigation Method for Multiple-antenna D2D Communication System," Nov, 2012.

TEACHING

ECE220 Foundations of Electrical & Computer Engineering   Jan, 2014 - May, 2014
North Carolina State University

- Teaching two lab sections.

- Grading exams and homework

ECE212 Fundamentals of Logic Design   Jan, 2014 - May, 2014
North Carolina State University

- Grading homework and exams

- Office hour

ECE109 Introduction to Computer Systems   Aug, 2013 - Dec, 2013
North Carolina State University

- Teaching two problem sections

- Grading programming assignments and exams.