Bo Yang

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Education

- **University of Central Florida** **Orlando, FL**
  Computer Science, M.S. *08/2012 – 05/2014*
  - Research interests: Machine Learning, Computer Vision, Bioinformatics
  - G.P.A. 3.7/4.0
- **Beijing Institute of Technology** **Beijing, CN**
  Automation, M.E. *09/2006 – 06/2008*
  - Research interests: Intelligent systems, Electromagnetic Compatibility
  - Thesis: *Research on EMI Pre-Estimate and Intelligent Fault-Diagnosis System*
- **Nanjing Normal University** **Nanjing, CN**
  Electrical & Automation Engineering, B.S. *09/2002 – 06/2006*
  - Thesis: *A New Algorithm for Multi-task Scheduling in Distributed Control System*
  - G.P.A. 3.7/4.0

Work Experience

- **University of Central Florida** **Orlando, FL**
  Teaching Assistant *08/2013 – 05/2014*
  - COP 4020: Programming Language I (Spring 2014)
  - CGS 3763: Operating System Concepts (Fall 2013)

  Research Assistant *08/2012 – 08/2013*
  I worked in the Bioinformatics lab of University of Central Florida mainly on three projects: Metagenomic Binning, Nucleosome Prediction and 1000 Genomes Project.
- **Alcatel-Lucent** **Beijing, CN**
  Member of Technical Staff, Software *07/2008 – 07/2012*
  My job was to maintain Alcatel-Lucent's inner network-level simulation & test environment COOL(*Cellular Out-Of Lab*) for the company's wireless products. Instead of maintaining very expensive physical labs, our platform could support most tests in distributed low-end physical/virtual machines at any time any place with an Internet connection.

  As a developer, I took charge in building new features for the platform using C/C++, Ksh, Perl, Tcl/Tk, expect and other in-house languages. Following are major projects I completed:
  - expanding COOL as a general test platform based on VM and enterprise cloud,
  - deploying virtual machines(VMware ESXi, KVM and Xen) to COOL,
  - transplanting Alcatel-Lucent's CDMA products(such as Media Gateway and its controller) to our platform,
  - porting COOL from Solaris to Red Hat Linux,
  - new functions to facilitate product development and tests,
  - COOL automation and continuous integration system.

  Meanwhile, I also served as an advocate to maintain hundreds of COOL servers and support global developers and testers in Alcatel-Lucent for their use of COOL. Besides, I also coached new employee and interns.

During the four years in Alcatel-Lucent, I delivered 20+ new features to our environment, solved 200+ users' issues and provided 7 training sessions to our users. And as a whole, my team saved the company millions of dollars and speeded up the development of dozens of new wireless features.

Selected Projects

- **Action Recognition with Fisher Vector and Dense Trajectories** *01/2014 – 02/2014*
  This project aimed to do human action recognition on dataset UCF 101 with the Improved Dense Trajectory Features(IDTF) encoded by Fisher Vector. After extracting the IDTF of UCF 101 video clips, I implemented the pipeline of Fisher Vector encoding and linear SVM classification in Matlab. Finally I got a mean accuracy of 85.53% on dataset UCF 101 with the IDTF features.
- **Action Recognition with Deep Learning** *08/2013 – 11/2013*
  This project aimed to do human action recognition on dataset UCF 101 using Independent Subspace Analysis(ISA) neural network. The ISA networks can learn features that are robust to local translations with unsupervised training. With my Matlab implementation, the mean accuracy of action recognition was 59.6%, which was about 15% higher than the baseline.
- **Metagenomic Binning with Generalized Poisson Model** *09/2012 – 05/2013*
  Metagenomics is the study of microbial communities sampled directly from their natural environment, without prior culturing. In this project, I designed and implemented a Generalized Poisson Distribution(GPD) model in C++ to cluster metagenomic reads into as many species as possible. Finally my GPD model could identify more species than the well-known AbundanceBin method.
- **EMI Measurement & Fault-Diagnosis System** *08/2007 – 05/2008*
  The goal of this project was to build a complete solution for Electromagnetic Compatibility(EMC). While spectrum analyzer and Rohde & Schwarz EZ-17 probes were used as the hardware, I implemented the software of EMI(*Electromagnetic Interference*) prediction, measurement and faults diagnosis using Visual C++(MFC) and SQL server.

Publications

- XU Long, GU Juan, **YANG Bo**, et al., *Common Test Platform Based on Virtualization and Cloud Computing*, the Alcatel-Lucent China Product R&D Technical Symposium, December 9, 2011, Shanghai, China (Best Paper Award)
- GAN Ming-Gang, CHEN Jie, **YANG Bo**, et al., *Intelligent Fault Diagnosis Research of Electromagnetic Interference Based on the Combination of CBR and RBR*, the 29th Chinese Control Conference (CCC), July 29-31, 2010, Beijing, China

Technical Skills

Programming Languages: C/C++, Python, Java, Matlab, Shell, Perl, Tcl/Tk, Expect, JavaScript, AWK, SED, Visual Basic, Go, SQL
Operating Systems: Linux/Unix, Mac OS X, Windows
Databases: MySQL, Oracle, SQL Server

Awards & Honors

- Best Paper Award, by Alcatel-Lucent China Product and R&D *Dec, 2011*
- China National Stipend, by State Council of China *Oct, 2005*

Services

- Volunteer of conference ACM-BCB 2012, Orlando, FL USA *Oct, 2012*