Chen Zhang

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Summary

- Seeking internship in innovative growing companies with great aim and vision; passionate about all kinds of new ideas.
- With solid computer science background, data science capabilities, engineering expertise and research skills.

Coding Skills

Languages: C, C++, Java, Python, Ocaml, Javascript, Matlab
Systems and Network: Unix, dsPIC33, Wireshark, Nmap
Software Development: Jenkins, Maven
Learning Packages: Chainer, TensorFlow, Weka
Database: MySQL, MongoDB

Education

2014 – 2017 (Expected) **Doctor of Philosophy**
Aerospace Engineering GPA 3.9
University of Illinois at Urbana-Champaign (UIUC)

2011 – 2014 **Master of Science**
Civil Engineering GPA 3.95
University of Illinois at Urbana-Champaign (UIUC)

2007 – 2011 **Bachelor of Science**
Civil Engineering GPA 3.8
Southeast University, China

Selected Projects

- Software Engineering: We wrote a Jenkins plugin that displays and tracks the statistics of test cases. We also wrote Junit tests and jasmine tests for the plugin (My role: Junit and jasmine tests, various functionalities).
- Web Programming: We wrote a social web app where a person can create events, upload pictures to an event and share an event and pictures with other users. (My role: server backend)
- Deep Learning: Single layer neural network, convolutional network, recurrent network. A project to combine the content and the artistic style of two pictures.
- Embedded System: We wrote programs for a dsPICf microcontroller, including timers, motors, interrupts from a control stick, communication with PC, and control algorithms to balance a ball to roll in a circle.
- Communication Network: Implemented major routing algorithms (distance vector, link state).

Selected Graduate Courses

Algorithms, Software Engineering, Operating System
Advanced Distributed Systems, Machine Learning
Advanced Information Retrieval, Embedded Systems
Advanced Database Management, Deep Learning,
Numerical Analysis, Web Application Development
Mathematical Statistics, Topology Optimization Methods

Research and Teaching Experiences

Jan 2014 – Current

Numerical Simulation of Thin Film Failure in Microelectronic Devices *UIUC*

Wrote numerical simulator for the process of thin film failure in microelectronic devices. Programming languages used include C++, Fortran and Matlab. Performed molecular dynamic simulation and evaluated intrinsic properties of gold interfaces.

Aug 2015 – Current

Modeling of MicroVascular Fluid Heat Exchanger *CU Aerospace – Lockheed Martin*

Built model, performed simulation on the fluid-thermal problem, and extracted methods to improve thermal performance, for manufacturing of the microvascular heat exchanger at CU Aerospace and Lockheed Martin.

Previous Experiences *UIUC, Southeast University*

- Teaching Assistant: System and Control Labs, Numerical Analysis, Finite Element Methods.
- Numerical Simulation: Constitutive Modelling of Hyper Elastic Porous Material

Conference and Journal Papers

- A Multi-Scale Framework on Capturing the Effect of Roughness on the Cohesive Strength of Self-Assembled Monolayers
  International Mechanical Engineering Congress Exposition, 2015
- The Effects of Surface Morphology on the Cohesive Strength of Self-Assembled Monolayers
  Society of Engineering Science, 2014
- A Multi-Scale Model on the Effect of Roughness on the Cohesive Strength of Self-Assembled Monolayers *(submitted)*
- Effects of Interface Roughness on the Cohesive Strength of Self-Assembled Monolayers *Applied Surface Science, 2016*