

# Zhuangfan Li

5637 Ashland Ct. Chino Hills CA 91709 · 617-922-5801 lizhuangfan@hotmail.com

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## EDUCATION

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**Northeastern University**, Boston, MA

Sept. 2009 - May 2012

Master of Science in Mechanical Engineering, GPA: 3.33 / 4.00

Related courses: Advanced Mathematical Methods for Mechanical Engineers, Dynamics and Mechanical Vibration, Finite Element Method, Control and Mechatronics, Financial Management for Engineering, Computer Aided Design and Manufacturing

**Wuhan University**, Wuhan, Hubei, China

Sept. 2005 - July. 2009

Bachelor of Science in Mechanical Engineering, GPA: 3.62 / 4.00

Related courses: Mathematical Methods for Mechanical Engineers, Fundamentals of Machine Design, Mechanics of materials, Mechanical Drawing, Technology of Electrical Engineering and Energy, Computer Aided Design

## SKILLS

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**Applications:** Microsoft Word, Excel, PowerPoint, AutoCAD, SolidWorks, Pro/E, MATLAB, ANSYS

**Language:** English, Chinese

## RELEVANT EXPERIENCE

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**Feiyue U.S.A Inc.** Chino, CA, US

Product Development Manager, Full-time

Mar. 2013– Present

- Applied a comprehensive understanding of high-volume manufacturing processes and materials to optimize design
- Assisted design electro-mechanical integration system
- Communicated and exchanged information between factory and customer to achieve coherence
- Designed the accessories of sewing machines i.e. quilting robot frame
- Developed specific sewing machine parts by the requirements of the customer
- Participated in hands on prototype build, test and assemble
- Resolved the deficiency and quality issue appeared during normal wear
- Tested method development, implementation and validation for sewing systems
- Worked with Product marketing and industrial design teams to ensure a cohesive approach to the design of products

**Three Gorges Water Conservancy and Electric Power Co. Ltd.**, Yichang, Hubei, China

Assistant Mechanical Maintenance Engineer, Internship

Sept. - Dec. 2008

- Maintained the operation of the generator in Three Gorges Dam directed by advisor
- Monitored and maintained electrical control room of the spill dam
- Visited and observed power transmission line between power station and converting station as well as got familiar with its basic principle
- Inspected and flaw detected the navigation lock system and flood discharge gate

**Yituo China Co. Ltd.**, Luoyang, Henan, China

Assistant Mechanical Design and Manufacturing Engineer, Internship

May - Aug. 2007

- Assisted mechanist to design and manufacture transmission according to different requests
- Worked on the part drawing, assembly drawing and engineering drawing of the tractor engine by SolidWorks and compiled BOM and process flow
- Used general maintenance tools properly and skilled, i.e. turning, welding, milling, planning and grinding etc.
- Maintained and detected the assembly line of the bearing

**College of Engineering of Wuhan University**, Wuhan, Hubei, China

Vice-chairman of Student Association

Feb. 2006 - Jan. 2009

- Led and organized several student activities for College of Engineering
- Launched several Intercommunications between students and social companies
- Assisted faculty and professor to hold academic seminar every year

## ACADEMIC PROJECTS

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### **CAD Modeling and Design**

Feb. - Mar. 2012

- Selected and designed a product (a ball-point pen which consists of 11 parts)
- Created the SolidWorks files by parts, fully constrained assembly including collapsed drawing and explored view, as well as engineering drawings with 4 views

### **Finite Element Analysis**

Feb. - Apr. 2011

- Set up input and initialization for mechanical structure
- Computed element properties including element property matrix and element load vector for each element
- Constructed and assembled the mechanical structure in finite element model by MATLAB
- Calculated and plotted degree of freedom, strains and stresses for each mechanical structure
- Proved the FE basic theory that more elements are divided, the analysis results become more convergent

### **Design of Vehicle Steer-by-wire System**

Mar. - Jun. 2009

- Investigated the development and meaning of vehicle steer-by-wire system
- Worked in group to design the steer-by-wire system model under specific requirements and expressed by Auto-CAD and Pro/E
- Designed single chip of system by PROTEUS with advisor's help
- Tested, revised and simulated the software and hardware operation by MATLAB