Ruoxin Liu

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SUMMARY

Seeking a full-time entry-level mechanical engineer position or an internship, specializing in CAD design and Engineering data analysis in MATLAB

- Exposure in CAD design through SolidWorks and developing standard manufacturing drawings with AutoCAD
- Advanced skills in data and statistical analysis such as iterative closest point (ICP), implicit surface fitting, principal component analysis (PCA), and regression analysis through MATLAB code.
- Programming & Scripting Language: MATLAB (Advanced), Mathcad (Advanced), C/C++ (Basic)
- Software: SolidWorks, AutoCAD, MATLAB & Simulink, Mathcad, LabVIEW, Microsoft Offic

EDUCATION

Mechanical Engineering (Bachelor of Science), Baylor University GPA 3.7/4.0 *8/2013-8/2016*

Minor: Mathematics

Courses: Fluids, Advanced Thermodynamics, Heat Transfer, Sustainable Engineering, Instrumentation and Measurements, Dynamics Systems, System Modeling and Control, Machine Design

Organization: Pi Tau Sigma Honor Society, Dean's List (2014-2015)

EXPERIENCE

Design Specialist, Baylor University

Ping Pong Ball Transport Machine *8/2015-12/2015*

- Developed 3D CAD models for customized power transmission devices using SolidWorks, produced engineering drawings with AutoCAD specifying part dimensions/tolerances and assembly details for manufacturing
- Cultivated hands-on experience in welding, drilling, polishing and cutting while making the machine
- Interpreted engineering drawings and generated corresponding 3D CAD models for performance analysis
- Prepared manuals for motorized prototype by specifying technical parameters and manufacturing details

Venturi Flow Meter Analysis *1/2015-6/2015*

- Cultivated skills in Excel and Mathcad, and used results to decide among multiple instruments
- Improved the flow performance by accounting for budget, time constraints, and experimental boundaries
- Performed analysis in Mathcad by applying Fluid Mechanics to select ideal instrument to measure temperature and pressure in a flow

Undergraduate Research Assistant, Baylor University *3/2015-1/2016*

Influence of Multiple Interaction Primary Modes & Mode Presentation on Hypersonic Boundary-Layer Stability

- Developed skills in team work, data analysis, research, leadership, presentations, and auto didacticism by assisting Baylor University professor, Dr. Kuehl, on his research in hypersonic boundary-layer stability
- Worked in groups to solve for low speed boundary-layer using an iterative method (generalized minimal residual method) for the numerical solution
- Programmed MATLAB scripts to reduce dimensions of data sets through principle component analysis, and relate geometry data to the factors through regression analysis

Mechanical Testing Intern, Suzhou Dongfeng Fineblanking Engineering Co. Ltd *12/2014-01/2015*

- Gained experience in reading and interpreting data sheets and schematics
- Worked with clients to define, establish, and clarify their business and technical requirements
- Conducted a quasi-static loading experiment to measure the loading limit for failure and the stretched length of 1018 cold-rolled steel specimen by using a MTS machine and a extensometer