

CHARLES LU

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, College of Engineering

Atlanta

B.S. Mechanical Engineering, GPA 3.5/4.0

05/2013

- Stamps Presidents Scholar – Four-year full scholarship awarded to the top ten President's Scholars
- Georgia Tech Capstone Design Award Winner – Best Industrial Design & People's Choice (Interdisciplinary)

NATIONAL TAIWAN NORMAL UNIVERSITY, Mandarin Training Center

Taipei

Intensive Course, Practical Chinese Reading and Writing, Vol. 1-2

09/2013 – 05/2014

EXPERIENCE

VANGUARD MOTO INC

Brooklyn

Head of Sourcing, Manufacturing Engineer

02/2016 – Present

- Managed development and testing schedule for first running prototype motorcycle
- Sourced prototype parts and services domestically and internationally (China, Taiwan) from 50+ vendors
- Created Bill of Materials to track prototype cost and estimate volume production cost through regression analysis

ACCENTURE

Atlanta

Technology Consulting Analyst

01/2015 – 01/2016

- Specialization in cloud CRM system implementations
- Guided clients through iterative application design sessions to create detailed design documentation
- Collaborated with offshore teammates during application build phase to coordinate delivery

APPWORKS VENTURES

Taipei

Market Analysis Intern

09/2013 – 09/2014

- Examined Taiwan's emerging software startup ecosystem from the investor's point of view
- Helped shape investment decisions through studies on Mobile Point of Sale, Crowdfunding, and Wearables

EXXONMOBIL RESEARCH AND ENGINEERING COMPANY, AAEO

Baytown

Fixed Equipment Student Engineer

05/2013 – 08/2013

- Collaborated with refinery contact engineers to formulate mathematical models of furnaces and heat exchangers
- Performed simulations supporting corrosion analysis, heat transfer optimization, and vibration reduction
- Developed recommendation reports for equipment operation improvements
- Highest value rec. reduced fuel usage by 2%, waste heat by 13%, operating cost by \$1.07M over 10 years

SONETER

Atlanta

Design and Testing Engineer

01/2013 – 05/2013

- Refined and implemented improved ultrasonic transducer designs developed during GT Capstone course
- Designed and constructed multiple-unit testing apparatus, resulting in a tenfold increase in testing capacity
- Conceived and fabricated product demonstration apparatus which helped secure a critical partnership

EXXONMOBIL RESEARCH AND ENGINEERING COMPANY, CSR

Clinton

Research Intern

05/2012 – 08/2012

- Supported heat and sound pressure sensor design efforts through COMSOL Multiphysics simulation
- Investigated resonant furnace acoustics using FEM and mathematical models
- Generated parametric transient simulations to examine heat transfer and acoustic feedback phenomenon

GEORGIA TECH BEN T. ZINN COMBUSTION LABORATORY

Atlanta

Research Assistant

01/2010 – 05/2013

- Characterized combustion instability in refinery gas furnaces through acoustics simulation
- Designed high speed particle imaging experiments to examine effects of acoustics on flame instabilities
- Explored and modeled acoustic energy dissipation mechanisms in gas turbine combustors

SKILLS & INTERESTS

Skills

Software — MATLAB / Octave • LabVIEW • 2D/3D CAD • COMSOL • Python
Hardware — waterjet • laser cutter • 3D printer • manual mill and lathe • electronics
Language — Chinese (native speaker, intermediate written) • French (intermediate)

Making

Footsie Mechanical Prophylactic Device — Prototype and POC build for gamifying blood clot prevention
Georgia Tech Invention Studio — Instructed users on equipment safety and prototyping best practices

Recreation

Outdoor rec, cooking, amateur blacksmithing, motorcycling, team sports (ultimate frisbee and ice hockey)