Michael Tucker

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EDUCATION

Stanford University Expected 2018

- BS in Mechanical Engineering, minor in Computer Science
- Courses in statics, dynamics, fluids, thermodynamics, manufacturing, product design, electronics, statistics, computer science.
- GPA: 3.91

EXPERIENCE

Powertrain Quality Engineering Intern – *Tesla Motors* Summer 2016

- Executed experiments to stress test various drivetrain components.
- Designed, built, and programmed coolant flow control systems.
- Developed applications and databases to track thermal testing.
- Automated data analyses of dynamometer performance.

Autonomous Vehicle Interaction Researcher – *Center for Design Research* 2015 – 2016

- Stanford University research sponsored by Google, Renault.
- Developed driving style iPhone app to track, compare driving styles.
- Validated FACET facial tracking/emotion capture software.

Vice President – *Lighting Innovation and Technology Education at Stanford* 2015 – Present

- Created published research in lighting and theatrical innovation.
- Developed technology for LED video wall and computerized moving lights.
- Managed funding for lighting design and innovation.

Board Member, Technical Director – *Ram's Head Theatrical Society* 2014 – Present

- Developed, programmed theatrical automation for shows.
- Designed/co-designed lighting and set for six shows at Stanford.

PROJECTS

For a full portfolio, go to www.stanford.edu/~mictuc

Convolution: Interactive Digital Clock – *ME 203 Final Project* Spring 2016

- Designed helically shaped digital clock form in SolidWorks.
- Used brazing, turning, milling, sheet metal forming, CNC to create form.
- Wired and programmed electronics from scratch.
- Incorporated sensor to detect gesture input from user to control clock.

LITES Friction Drive Automation – *LITES* Winter 2016

- Developed idea to create novel theatrical automation system.
- Designed system and mechanics in SolidWorks.
- Led a team of 8 college students to fabricate 4 drive units.
- Created software to help program 2 degrees of freedom

Electric Go-Kart – *Independent Project* Spring 2014

- Designed entire all-electric go-kart.
- Fabricated frame and drive train from scratch.
- Wired electric motor, batteries, charger, controller, and throttle.

SKILLS

Fabrication: Welding (MIG, TIG, Oxy-Acetylene), Turning, Milling, Woodworking, Rigging

Design: SolidWorks, VectorWorks, WYSIWYG

Electronics: Soldering, Arduino, Raspberry Pi, household and theatrical wiring

Programming: C, C++, C#, Java, Python, Swift (iOS), SQL, Matlab