Michael Tucker

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EDUCATION

STANFORD UNIVERSITY

MS in Mechanical Engineering
Expected June 2019 | Stanford, CA
Concentration in Mechatronics

BS in Mechanical Engineering
Minor in Computer Science
Expected June 2018 | Stanford, CA
Tau Beta Pi Honors Society (Top 1/8)
GPA: 3.95

PRINCETON DAY SCHOOL

Grad. June 2014 | Princeton, NJ
Cum Laude

COURSEWORK

UNDERGRADUATE

Statics
Dynamics
Fluid Mechanics
Heat Transfer
Thermal Systems
Manufacturing
Product Design
Statistics
Electronics
Computer Systems

SKILLS

FABRICATION

Welding (MIG, TIG, Oxy-Acetylene)
Turning • Milling • Woodworking

DESIGN

CATIA • SolidWorks • OnShape •
Vectorworks

ELECTRONICS

Soldering • Arduino • Raspberry Pi
High Voltage Training

PROGRAMMING

C • C++ • C# • Java • Python • Matlab
Swift (iOS) • LaTeX• SQL

EXPERIENCE

TESLA

Battery Engineering Intern
June 2017 – Sept. 2017 | Palo Alto, CA and Sparks, NV

- Designed and optimized Model 3 battery pack parts in CATIA
- Designed components to aid Model 3 battery pack automation line
- Collaborated with suppliers from around the world
- Prototyped and tested various part designs

Powertrain Quality Engineering Intern
June 2016 – Sept. 2016 | Fremont, CA

- 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.

CENTER FOR DESIGN RESEARCH

Autonomous Vehicle Interaction Researcher
Jan 2015 – Sept. 2015 | Stanford, CA

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

RAM'S HEAD THEATRICAL SOCIETY

Board Member & Technical Director
Sept 2014 – May 2017 | Stanford, CA

- Helped manage the organization, orchestrate three large theatrical productions, manage and grow a large endowment.
- Developed technology for LED video wall, lighting and set automation.
- Designed lighting or set for seven shows at Stanford.

PROJECTS

For full portfolio and media, visit stanford.edu/~mictuc

CONVOLUTION: INTERACTIVE CLOCK | ME 203 Project

Spring 2016 | Stanford, CA

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

FRICTION DRIVE AUTOMATION | LITES

Winter 2016 | Stanford, CA

- Designed novel, modular, theatrical automation system in SolidWorks.
- Led a team of 8 college students to fabricate 4 drive units.
- Developed software to help program automation with 2 degrees of freedom.

ELECTRIC GO-KART | High School Senior Project

Spring 2014 | Princeton, NJ

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