Michael Tucker

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EDUCATION

STANFORD UNIVERSITY

MS in Mechanical Engineering
Grad. June 2019 | Stanford, CA
Focus in Design and Manufacturing
GPA: 3.80

BS in Mechanical Engineering
Minor in Computer Science
Grad. June 2018 | Stanford, CA
Graduated with Distinction
Phi Beta Kappa Honor Society
Tau Beta Pi Honor Society
GPA: 3.94

PRINCETON DAY SCHOOL

Grad. June 2014 | Princeton, NJ
Cum Laude

COURSEWORK

UNDERGRADUATE

Dynamics
Controls
Fluid Mechanics
Heat Transfer
Mechanics of Materials
Product Design
Computer Systems
Artificial Intelligence

GRADUATE

Computer Aided Product Creation
Manufacturing Systems
Vehicle Dynamics
Mechatronics
Injection molding
Precision Engineering

SKILLS

DESIGN

CATIA • SolidWorks • OnShape
GD&T • FEA • CAM • PDM/PLM

FABRICATION

CNC Machining • Injection Molding
Turning • Milling • Woodworking
Casting • Sheet Metal • Vacuum Forming
Welding (MIG, TIG, Oxy-Acetylene)

ELECTRONICS

Circuit Design • Soldering • Arduino
Raspberry Pi • High Voltage Training

PROGRAMMING

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

EXPERIENCE

JOBY AVIATION | Mechanical Engineer

July 2019 – Present | San Carlos, CA

- Designed state of the art battery cooling systems for eVTOL vehicles.
- Planned and designed layout and workflow for battery pack assembly lines
- Led process development for key assembly processes
- Designed automated workcells, end of arm tooling, manual tooling, specify process equipment, and in-process test equipment.

PLENTY | Mechanical Engineering Intern

June 2018 – Sept. 2018 | South San Francisco, CA

- Planned and designed automated production line cells from scratch
- Specced and programmed industrial 6-DOF Fanuc robots (R-2000iC/270F)
- Designed, manufactured, integrated 5m long pneumatic end of arm tooling
- Managed integrators for a $1.1 million contract to design and develop custom conveyance mechanisms

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

TESLA | 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.

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 mictuc.github.io

DYNAMIC DRIVER'S SEAT | ME 113 Capstone Project

Spring 2018 | Stanford, CA

- Winner of the ME Department's 2018 Fuch's Award.
- Designed and fabricated dynamically controlled driver's seat.
- Specced, wired, coded stepper motor, transmission, and controller.
- Used four bar linkages to lean driver into turns.

CORONA: DYNAMIC LAMP | ME 318 Project

Winter 2018 | Stanford, CA

- Designed dynamically folding lamp design in SolidWorks.
- Used CNC router to machine buck, vacuum formed styrene shells.
- Wired for HV house power.