

# BRENT MICHAEL WOOLDRIDGE

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## EDUCATION

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### Texas A&M University

*Master of Engineering in Mechanical Engineering*

*B.S. in Mechanical Engineering*

College Station, TX

GPA: 4.00 - Dec 2020

GPA: 3.53 - Dec 2019

## EXPERIENCE

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### Volkswagen

*Vehicle Engineering; Pilot Hall Intern*

Chattanooga, TN

May 2019 – Aug 2019

- Supported between product development, planning, and production phases.
- Assisted with ramp-up of new vehicles according to quality, volume, and cost.
- Created design changes to pre-series vehicles and analyzed trial data.
- Performed RCA on defects, capability tests of parts, and designed fixtures.
- Verified process stability by measuring parts during production.

### Tesla

*Vehicle Engineering; Body in White Intern*

Fremont, CA

Sept 2017 – Dec 2017

- Improved control systems to address the quality of vehicle bodies and closures.
- Maintained accuracy of parts/assemblies through RCA and D/P FMEA.
- Became proficient with manufacturing processes, GD&T, and machine shop methods.
- Designed tools and safety structures for vehicles; several were implemented.

### United Airlines

*Propulsion Engineering Intern*

San Francisco, CA

Jan 2017 – Apr 2017

- Assisted with improving performance and reliability of turbofan jet engines.
- Checked aircraft propulsion systems, investigated system failures and maintenance incidents.
- Performed cost analysis and recorded data from engines used in Airbus/Boeing aircraft.
- Had the great privilege of traveling the world every week.

### Research

*Student Assistant*

College Station, TX

Jan 2016 – Dec 2016

- Performed research and generated models in Solidworks for various projects.
- Designed an injection mold for an ultrasonic pregnancy patch and a hydroelectric kayak hull.

## EXTRACURRICULARS

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### SAE Aero Design

*CAD/Manufacturing*

College Station, TX

Apr 2016 – Apr 2019

- Team of 25 engineers who design, build, and fly an electric powered 12' span RC aircraft.
- About 75 teams compete at the annual international competition. More info at [tamusae.org](http://tamusae.org).
- Contribution: Generated models in Solidworks and built the aircraft.

### Formula SAE

*Assistant to Senior Design Team*

College Station, TX

Sept 2015 – May 2016

- Assisted in maintaining and adding/removing parts of vehicles from prior years.

## COMPETITIONS

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**2017 SAE Aero:** Regular Class - 2nd Overall; Micro Class - 3rd Overall

**2018 SAE Aero:** Regular Class - 4th Overall (1st in US, 1st in Design)

**2019 SAE Aero:** Regular Class - 4th Overall (1st in Design, Most Payload)

**2019 Hackathon "HackUTD":** EcoBin: [devpost.com/software/bin](http://devpost.com/software/bin) (4th out of 106 teams)

## SKILLS

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**Advanced:** Solidworks • CATIA • Prototyping • Surface Modeling • 3D Printing • Project Mgmt • MS Office

**Intermediate:** Python • Alias • AutoCAD • GD&T • ANSYS • Matlab • Photoshop/Illustrator • German

**Other:** Experience with various 3D printable materials, machining tools/methods, and controls/circuitry.

## RELEVANT COURSEWORK

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Advanced Product Design • Advanced CAE • Generative Art & Design • Additive and Subtractive Processes in Custom Manufacturing • Mechanical Design Engineering • Material Selection in Design • Alternative Energy Conversion • Solar Energy Engineering • Dynamic Systems & Controls