KIVANÇ YILDIZ

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EXPERIENCE

Tesla, Inc. February 2020 - Present
Mechanical Design Engineer — Drive Systems *Palo Alto, California*

- Assumed **end-to-end ownership** of motor components such as rotor shaft and phase junction for Model 3/Y from design, DFM, and validation testing
- Designed and fabricated a retention torque rig for stator housings to increase understanding in the joint retention
- Developed semi-automated high voltage electrical testing for partial discharge using **Python**

Tesla, Inc. August 2019 - December 2019
Mechanical Design Intern — Drive Systems *Palo Alto, California*

- Performed **tolerance stack-ups** with thermal expansion for the next generation Plaid powertrain rotor
- Modeled the Plaid rotor balance rings on **CATIA V5** including drawings with appropriate **GD&T**
- Implemented a **radial growth measurement** system onto an existing spin tester using laser micrometers
- Developed a **custom test shaft** for the semi-truck platform and validated the design using **ANSYS**

Tesla, Inc. May 2018 - August 2018
Test Engineering Intern — Low Voltage Controllers Design & Test *Bay Area, California*

- Increased serviceability and lifetime of the Drive Unit Controller tester by creating custom **PCBs** using **Altium**
- Identified connectors on the Model 3 **wiring schematic** to design custom enclosures for low voltage testers with **power supplies, relays, CAN and LIN dongles, and displays**
- Manufactured many custom enclosure solutions for low voltage testers with component modules such as power supplies, relays, CAN and LIN dongles, and displays

FORMULA SAE

Formula uOttawa September 2015 - Present
Technical Director & Lead Chassis Designer *Ottawa, Ontario*

- Managed annual team budget of $70,000
- Developed analytical models using **MATLAB** to help achieve lighter weight, and increased performance
- Modeled the chassis in **Solidworks** and performed FEA using **ANSYS** to validate the design

ACADEMIC RESEARCH

University of Ottawa / National Research Council September 2018 - Present
Transpiration Cooling Efficiency of Porous Materials *Ottawa, Ontario*

- **Published** a paper on Transpiration Cooling Efficiency of Porous Materials and **presented** at ISABE 2019 conference in Australia
- Developed **testing procedures** for systematic paint application and data collection using a low-speed wind tunnel, **CCD camera**, and a UV light source
- Implemented a variation of polynomial regression model in **Python** using **Scikit-Learn** to identify partial pressure of oxygen at any given location on the sample using **pressure sensitive paint (PSP)**

EDUCATION

University of Ottawa
Bachelor of Applied Science, Mechanical Engineering (CO-OP) April 2019
President of *Mechanical Engineering Student Society*
Scholarships: University of Ottawa Merit Scholarship (2019), NSERC Industrial Research Award (2018, 2017)