Sterling Just

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EDUCATION

University of Wisconsin – Madison Sept. 2014 - May 2019

B.S. in Applied Mathematics, Engineering and Physics (AMEP) – focus**: Mechanical Engineering**
Certificates in Engineering Thermal Systems, Studio Art – Photography
Cumulative GPA: **3.52/4.00**

Relevant Coursework: Thermal Systems Modeling, Computational Fluid Dynamics (CFD), Heat Transfer, Thermodynamics, Solar Energy Technology, Mechanics of Materials, Machine Component Design

EXPERIENCE

Head Tutor, Tutor for Mechanical Engineering Aug. 2015 – May 2019
Undergraduate Learning Center Madison **Madison, WI**

- Facilitated large group drop-in-tutoring as and individual tutoring-by-request sessions for:
  - Mechanical Engineering: Thermodynamics, Heat Transfer, Fluid Dynamics
  - Mathematics: Calculus & Analytic Geometry, Multivariable Calculus
  - General Physics: I (Mechanics), II (Electricity & Magnetism)
- Managed, scheduled, and resolved conflicts for 15-20 tutors on during drop-in-tutoring nights
- Collaborated with other tutors to aid 50-150 students per night with homework and course concepts

U.S. Bose Scholar / Engineering Intern May 2017 – Aug. 2017
Indian Institute of Science, Dept. of Mechanical Engineering **Bangalore, India**

The S.N. Bose Scholars program is a research reciprocation exchange between U.S. and Indian academic labs

- Learned General Algebraic Modeling Software (GAMS) for mathematical modeling
- Used GAMS to model electric grid and compute electricity cost for consumer
- Added energy storage, renewable energy sources, and real weather data to model
- Optimized model to minimize electricity cost given available fuel sources
- Developed confidence initiating projects and working autonomously
- Refined verbal and written communication skills through academic writing
- Gained experience living abroad, traveling, and communicating across cultures

RELEVANT SKILS

- **Mechanical Systems** (FEA, component design, stress-strain analysis, failure theories, dynamics)
- **Thermal Systems** (heat exchangers, refrigeration/heat-pump/power cycles, thermodynamic devices)
- **Mathematics** (optimization, linear algebra, differential equations)
- Expert in Microsoft **Excel, Word,** and **PowerPoint**
- Numerical methods in **MATLAB**
- Object-oriented programming in **Python**
- Embedded systems with **Arduino**
- Basic 3D Design with **Fusion360** and **Solidworks**
- Experience with thermal systems modeling