ZACHARY LAVALLEE

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I am a Software Engineer who graduated with a Mechanical Engineering degree and won 8 innovation awards while at UW Madison. I worked on many Internet of Things (IOT) projects while in school and started an industrial IOT company that has made over $100k. I am very interested in Machine Learning and AI, and I focus all of my personal projects on improving at it.

TECHNICAL SKILLS

- Languages: Java, C, C++, Python (Flask & SQLAlchemy), SQL, Swift, HTML, CSS, JS (Knockout.JS) and PHP
- Other: AWS (LightSail, Route 53, and EC2), Apache HTTP, git (GitHub), and Unix/Linux OS.
- CAD Experience: SolidWorks, NX, and 3D Printing.

EXPERIENCE

July 2015 – Present   Emonix (https://www.emonix.io)   Madison, WI
COO – Product Design and Sales

Emonix Inc. makes a patent-pending calcium monitoring system for commercial water softeners. Emonix has saved all of its customers >30% of their salt usage, and $2500/year on average.

- Founded in July 2015 with a UW – Madison student and grew Emonix to $100k+ in total revenue.
- Designed the hardware and ran a small manufacturing team to meet production.
- Co-developed the online monitoring interface and database.
- Won 1st place at the UW Transcend, CS Nest Software, Dvorak Energy Innovation, Madworks Economic Impact competitions and Wisconsin Environmental and Sustainability Challenge.
- Award winner in the U.S. EPA Advanced Septic Nitrogen Sensor Challenge and top 25 in the Wisconsin Governor's Business Plan Contest.

March 2014 – May 2017   Graduate Student Project Assistant   Madison, WI
Assistant Engineer

- Teamed with Computer Science graduate students on several projects.
- Built a smart home air vent system and a cloud connected hard drive hub.
- Assisted in the writing and research of two ACM BuildSys conference accepted papers:
  Water or Slime? A Platform for Automating Water Treatment Systems
  SPOCK: A Sensor Value Prediction and Online Control Algorithm for Building Resource Management

May 2014 – May 2015   UW HSLC Tech Support   Madison, WI
- Solved computing problems for the UW Medical School and accompanying offices.

EDUCATION

September 2012- May 2017   University of Wisconsin - Madison   Madison, WI
- Graduated with a degree in Mechanical Engineering
- Chi Psi Fraternity – President
  - Managed an annual budget of $200k and orchestrated two philanthropies raising over $50k.
- Volunteer work with Gio's Garden, Boys and Girls Club of America, and others.

September 2009 – May 2012   Saint Louis Priory High School   St. Louis, MO
- Student Advisory Committee – Advised the administration on policies and programs.

REFRERNCES AVAILABLE UPON REQUEST