

Andrew Cross • www.agcross.com • (316)-200-1161 • andrewgcross@gmail.com

Current Address: *Available upon request.*

PROFILE

Adaptable and personable, I'm in search of a challenging position that allows me to work with motivated people and utilize my unique mechanical/computational background.

WORK EXPERIENCE

Research Engineer – Center for Energy Research; Las Vegas, NV *Aug. '14 – July '15*

- Designed, analyzed, and created shop drawings for a large modular Li-ion battery enclosure that would allow 72 individual battery packs to act as a single energy storage system
- Modeled the thermal response of multi-zone buildings with EnergyPlus to facilitate the development of new temperature/energy control strategies
- Wrote Python code for data analysis and numerical modeling of residential energy consumption
- Applied multiple machine learning techniques to HVAC controllers and quantified their efficacy
- Contributed to writing federal grant-based progress/final reports

Graduate Research Assistant – Center for Energy Research; Las Vegas, NV *Jan. '13 – July '14*

- Designed, and published, a comprehensive multi-controller system to integrate a solar thermal collection system, hydronic heated floor, and mini-splits in a multi-zone environment
- Researched demand-side distributed optimization of peak energy shifting for residential homes in the Las Vegas valley

Engineer II – Pentair Engineered Flow; Kansas City, KS *Mar. '10 – Aug. '12*

- Performed research that formed the basis for a section of the ANSI/HP Pump Standards
- Concurrently managed multiple projects, each in excess of \$1,000,000
- Authored internal design standards, including parametric SolidWorks models and an extensive document detailing the standard method of design for a critical hydraulic component
- Created a program to automatically generate hydraulic curves for ~100 pumps in the product line
- Requisitioned materials, created BOMs, and issued work orders in support of assigned projects
- Developed training for new hires and created the summer intern “curriculum” in use today

EDUCATION/CERTIFICATIONS

The University of Nevada, Las Vegas / Las Vegas, NV *Graduation: July '14*
MS, **Mechanical Engineering** (*thesis option*)

The University of Kansas / Lawrence, KS *Graduation: May '09*
BS, **Mechanical Engineering**

EIT/ FE certified by Kansas State Board of Technical Professions *Apr. '08*

Certified SolidWorks Professional (ID: C-FRM75VCHPR) *Mar. '11*

PROGRAMMING EXPERIENCE

One of my skills as an engineer is that I can learn programs and computer systems very quickly. This is a list of relevant languages/programs I am either very well versed in, or at least usefully familiar.

Python, PHP/SQL, Excel/Access (particularly including VBA), MATLAB, LabVIEW, PBASIC, C++