

KEONA ARNESON

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EDUCATION

Boise State University

Boise, ID

B.S. Electrical Engineering

Expected 2027

- **Cumulative GPA:** 3.51/4.00 | **Major GPA:** 3.70/4.00.
- **Coursework:** Smart Grid & Renewable Energy Systems, Power System Analysis I (Fall 2026), Power Electronics (Fall 2026), System Modeling & Control.

SKILLS & CERTIFICATIONS

Software & Languages: MS Office, Python, Salesforce, GIS, CRS, MATLAB/Simulink, SAM, LTspice.

Certifications: NCEES FE Exam, CTECS Workplace Readiness Skills Assessment.

EXPERIENCE

Ulteig

Boise, ID

Electrical Engineer (Intern)

May 2026 – Present

- **Core Responsibilities:** Review and process an average of 40 DER interconnection applications per week, confirming compliance with Xcel Energy's interconnection standards prior to approval.
- **Technical Implementation:** Apply Xcel Energy's CR Requirements and Assumptions to evaluate interconnection requests; track findings and review status through CRM and Excel.
- **Collaboration:** Escalate complex or edge-case interconnection reviews to design and graduate engineers for resolution, and participate in regular check-ins with the Ulteig team and PSCo stakeholders to align on review status and standards updates.
- **Tech Stack:** Excel, Salesforce, GIS, CRS.

Boise State University

Boise, ID

Vertically Integrated Project Student

Jan. 2026 – May 2026

- **Hands-on Sensor Computing:** Built a low-cost, solar-powered camera system for remote Kestrel nest box monitoring, addressing the lack of photovoltaic capability in existing commercial solutions. Used battery discharge-curve analysis and a PiSugar 3 power management board to estimate battery capacity within $\pm 20\%$ accuracy and size a 5W solar panel, troubleshooting battery/power bank compatibility for reliable operation.
- **Tech Stack:** Python, Multimeter/Oscilloscope, Function Generator, Soldering/Breadboarding.

PROJECTS

Residential PV Study: Designed and modeled a grid-tied residential PV system in System Advisor Model (SAM), sizing a 4.1kW panel array with a 4kW inverter based on site irradiance and load data. Performed economic and sensitivity analysis across net metering, buy-all/sell-all, and net billing scenarios, incorporating federal and state tax incentives to achieve a levelized cost of energy of 0.90 cents/kWh and a 3.3-year payback period.

GFM Survey Report: Authored a technical report on grid-forming (GFM) inverter capabilities in renewable energy systems, synthesizing 11 peer-reviewed IEEE sources on GFM advantages in voltage balancing, synthetic inertia, and frequency control, plus microgrid black-start and islanded operation applications.