Samuel Roberts-Baca

Data scientist and researcher with 5+ years of experience developing data science solutions.

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Portfolio github.com/samrobertsbaca linkedin.com/in/samrobertsbaca

EDUCATION

M.S. Data Science, University of Denver
2020 – 2022 · 3.84 GPA

B.S. Computer Science, University of New Mexico
2014 – 2019 · 3.50 GPA w/ Honors Distinction

WORK EXPERIENCE

Graduate Research & Development Intern, Sandia National Laboratories **Albuquerque, NM**
Albuquerque, NM · December 2018 – May 2022

December 2020 – May 2022

- Designed and developed the **Lithium-ion Battery Thermodynamic Web Calculator**.
- Optimized Time-Series Data Visualization on the **Battery Archive**, an open access repository of battery data.
- Researcher, co-author and presenter for three data science application research papers published in IEEE conferences.
- Assisted with research needs on the **U.S. Department of Energy Storage Handbook**.

December 2018 – December 2020

- Re-designed, developed, and maintained the **U.S. Department of Energy Global Energy Storage Database**, the premier database for open-source energy storage project data worldwide. Managed external contractors, additional developers, and data validation assistants throughout development.
- Performed statistical analysis and developed tools for various research & development applications as needed.
- Developed tools to automate virtual conference management and internal data collection procedures.

Co-Founder / Game Developer, Cronyx LLC **Albuquerque, NM**
Albuquerque, NM · June 2019 – Present

- Co-developed *qubo—a perspective puzzle game*, a novel puzzle game about space and perspective, in C# and Unity. Launched on iOS, Android, and PC to hundreds of sales.
- Prototyped and pitched a community-service app to a panel of investors at the University of New Mexico's annual app competition, securing $2500 in seed money.

PUBLICATIONS

- Hernández, J., Roberts-Baca, S., & Gurulé, G. (2021, October). A Prototype Small Utility-Scale Joint Vertical Axis Wind Turbine and Solar Energy System (VAWT/SES) to Provide Water Pumping in Remote Areas of Uganda. In 2021 IEEE Global Humanitarian Technology Conference (GHTC) (pp. 360-367). IEEE.
- Hernández, J., Roberts-Baca, S., & Etemadi, A. (2021, August). Designing a Monte Carlo Model with Python to Predict the Life Cycle Disposal Costs for Grid-Level Electrical Energy Storage Systems. In 2021 IEEE PES/IAS PowerAfrica (pp. 1-5). IEEE.
- Hernández, J., Etemadi, A., Roberts-Baca, S., & Muthyapu, V. K. (2021, April). Developing a logistic regression method for valuation of grid-level energy storage systems. In 2021 IEEE Conference on Technologies for Sustainability (SusTech) (pp. 1-8). IEEE

OTHER INTERESTS

Podcast Host, January 2022 – Present

- Hosted a weekly podcast in 2022 to facilitate a variety of meaningful conversations with diverse individuals in local Albuquerque community.

Songwriter & Musician, February 2013 – Present

- Composed, arranged, recorded, and released over 150 original songs, most recently under the moniker *John King Cave*.

Co-Chair, Albuquerque ACT-SO, January 2020 – Present

- Mentor high school students to produce competitive work for local and national Academic, Cultural, Technological and Scientific Olympics (ACT-SO) competitions.