

# Job Posting

## Smartville, Inc.

Carlsbad, CA

## Battery Control Engineer

Battery Control Engineer at Smartville will work on model, develop, specify, and implement control algorithms for our high-voltage battery energy storage system, to achieve advanced battery functions and optimized performances. The role requires strong fundamental knowledge of control and model-based estimation design principals, extremely attentive to details, rigorous revisions and standard assurance. Battery control engineer drives collaboration with other engineering groups, requiring a team player mentality. Smartville moves and adapts quickly, you must be highly self- motivated and disciplined. You will specify, design and test the battery estimation, control, protection algorithm for our battery packs.

### Responsibilities

- Develop algorithm to estimate battery SOC/SOH/SOP (state of charge/health/available power)
- Use a variety of cell and battery pack data, fleet data, and laboratory testing data to create state-of-the-art control and estimation algorithms for Smartville's high voltage battery packs.
- Using data driven approach (neural network and other modeling tools) to derive and validate battery aging model.
- Work on battery usable remaining life (URL) prediction, estimation and optimization.
- Create and integrate models, define algorithms, write testing code, and evaluate the performance of algorithms throughout the life of the product.
- Work cross-functionally with cell modeling, firmware, and battery safety tasks.

### Requirements

- Greater than 2 years of experience with battery algorithm design
- MS/PhD in mechanical, electrical, aerospace, or materials engineering
- Experience with modeling of lithium ion cells
- Simulating dynamic models of electrical systems
- Have knowledge in linear systems analysis and estimation algorithm design
- Capable of analyzing algorithm performance in MATLAB/Simulink
- Strong communication and preference for working in teams
- Basic experience, understanding, and intuition for the electrochemical physics of lithium ion cells
- Experience in specifying or executing tests on cells in a laboratory environment
- Understanding of diagnostic techniques for cells and battery pack components

**If you are interested in applying for the Battery Control Engineer position, please email your resume and cover letter to [Kim@smartville.io](mailto:Kim@smartville.io)**

"Smartville Inc. is proud to be an Equal Opportunity employer, and we embrace diversity and equality. We are committed to building a team with a variety of backgrounds, skills, and points of view. Smartville Inc. provides a work culture that is consistent with mutual respect and employment opportunities for all applicants, regardless of applicant's race, religion, age, gender, gender identity, sexual orientation, national origin, culture, disability status, military status, or any other protected class applicable by federal and state laws."