Doris Hsueh

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Experience

Google, Inc — Oct 2017 – Present

Hardware Engineer – Battery Validation & Failure Analysis — Mountain View, CA

- Evaluate cell and pack performance for consumer electronic devices such as phones, chromebooks, laptops, wearables & hearable products from Proto to Mass Production to ensure the performance, reliability & safety of various consumer use cases.
- Qualify new cell vendors (overseas) & chemistries for next-gen projects to meet internal specification requirements for different products.
- Determine root causes of failures on cells, packs or batteries in systems to improve the design or manufacturing process via data analysis, electrical testing, CT, microscopy & cell teardowns.
- Characterize and validate in-system battery performance such as thermals, charging & gauge behavior.
- Cross-functional collaboration with the system power, reliability, and product design teams to optimize the system integration of the battery.
- Characterize impedance over SOC, temperature and age to optimize user experience.
- Perform various DOE's to implement improvements in the cell design, chemistry or system software to extend cycle life performance.
- Correlate battery cycle life parameters to predict future failures.
- Evaluate the battery health and functionality in products stored long-term.
- Led the design & construction of a multi-million dollar battery lab.
- Manage battery test lab & train team members on testing & metrology equipment.

X, Inc — Contract: Nov 2015 – Jul 2016, FTE: Jul 2016 - Oct 2017

Hardware Engineer – Battery Validation & Failure Analysis — Mountain View, CA

- Evaluate Li-ion batteries (cylindrical, solid state & pouch cells) for advanced technology projects with unique use cases (Wing, Loon, Smart Contact Lens, VR headset).
- On-site vendor visits (overseas) for factory tours & technology roadmap discussions.
- Determine root causes of battery field failures in cells/packs.
- Approve system functionality, battery placement and reliability tests.
- Developed Matlab scripts to reduce battery data processing time.
- Designed and built testing fixtures for optimal thermal distribution to improve data quality.

Education

University of California, San Diego — 2011-2015

B.S. in Chemical Engineering (ABET Certified), Economics Minor. GPA: 3.67 (*Cum Laude);*
Taiwanese American Student Association Co-President

Personal Interests / Skills

Colloquial Mandarin Chinese, Cooking, Mixology, Soccer, Modern Art, Dance & Music