

Contact

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Top Skills

Analog
Power Electronics
Electrical Engineering

Languages

Turkish

Patents

Hybrid light source

Mehmet Ozbek

Electrical Engineer
San Francisco Bay Area

Summary

- Innovative and very strong design and development skills on both hardware and software
- Experienced in leading project teams in an efficient and productive manner that garners the most novel, reliable and timely solutions
- Proven good interpersonal skills working with customers and suppliers to understand the needs of both sides and get the best possible results for business
- Hands-on experience building and trouble-shooting circuits thus improving design techniques tremendously
- Equipped with RF hardware experience, wired and wireless communication protocols and physical layer knowledge with a keen interest in exploring more
- Strong analytical and problem solving skills
- Ability to design creative implementations to achieve an objective with simpler thus more reliable and cost effective solutions.

Experience

Tesla

10 years 11 months

Principal Electronic Design Engineer

May 2022 - Present (1 year 4 months)

Palo Alto

Sr Staff Electrical Engineer

October 2012 - December 2022 (10 years 3 months)

Palo Alto

Leading the team responsible for development and deployment of on-board chargers, vehicle DCDCs and various power electronics in Tesla Energy. Pushing boundaries of power electronics with novel topologies and controls as well as optimization algorithms and data science. Architecting next generation power electronics for Tesla.

Enphase Energy

Senior Hardware Engineer

July 2011 - September 2012 (1 year 3 months)

Petaluma CA

Designing high efficiency inverters to be used in renewable energy systems.

Lutron Electronics

Design and Development Engineer

July 2007 - June 2011 (4 years)

Coopersburg, PA

- Designed power converters in various topologies including buck, boost, push-pull, half bridge, resonant and flyback.
- Managed projects in terms of prioritizing and allocating tasks among teams members and coordinating different efforts to ensure timely delivery of the best results.
- Developed embedded software both in Assembly and C.
- Implemented analog and software control loops.
- Implemented power factor correcting front ends with microcontrollers, as well as with discrete ICs. Paid special attention to consume very little processing power from the micro
- Worked on magnetics optimization to deliver maximum amount of power efficiency with the smallest footprint while also being able to withstand extreme voltage potentials
- Developed special methods to characterize power loss in power handling devices such as magnetics and transistors.
- Designed and executed extensive experiments to analyze and minimize power loss in SMPS.
- Worked on layout optimization for minimal losses, EMI and also for signal integrity in a highly noisy environment.
- Designed analog and digital logic. The circuits were used for fault condition detection for power converters and adding new capabilities to off-the-shelf ICs with minimal parts count.
- Implemented unique control mechanisms to be able to dim LEDs and fluorescent bulbs

Education

The Pennsylvania State University

Bachelor of Science (B.S.), Electrical Engineering · (2002 - 2007)