Dacheng Li

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Education

- University of California, Los Angeles; Los Angeles, California
    - Physics with Statistics minor, anticipated Bachelor of Sciences, 2021

Skills

- Coding background- Python, C/C++, Bash, VBA, Mathematica
- Design- Solidworks, AutoCAD Inventor
- Assembly, Integration, and Test
- Requirements verification and validation
- Failure modes analysis
- Viewpoint analysis
- Model-based systems engineering
- Project management and planning
- Proposal writing and budgeting
- Prototyping
- Microsoft Office/Google Suite
- HAM system design
- Agile and Waterfall development

Major Activity Background and Work Experience

Bently Nevada

Intern, Systems engineering Team; June 2019-Sept. 2019

- Worked on development of multiple flagship condition monitoring platforms
- Formulated functional architecture flowdowns and managed top-level requirements
- Developed VBA tools to grade requirements for testability and to improve rate of approvals
- Served as primary contact and translator for Chinese-side systems engineering team

UCLA Smart Grid Energy Research Center (SMERC)

Student Researcher; February 2019-Present

- Reviewed academic and private research for potential smart-grid development paths
- Researched knowledge transfer system for testing of Machine Learning-driven insurance adjustment
- Developed prototype electric vehicle charger in compliance with ISO 15118 standards
- Designed long-range, last mile delivery drone with ROS and CAD tools to support lab objectives

UCLA EPSS

Student Researcher; November 2019- Present

- Developed and optimized radiometric temperature algorithms using software-defined radios and GNURadio
- Modeled Martian surface to predict RIMFAX data prior to instrument deployment on Mars
- Enhanced Perseverance Rover instrument capabilities

Bruin Spacecraft Group

Project Manager, RAPID- URSa mission; June 2020-Present

- Led redesign of satellite micro-constellation to ensure compliance with new design goals
- Led establishment of Blue Dot Satellite Consortium
- Restructured existing development schedule for flexibility with COVID-19

Lead Communications Engineer, RAPID- URSa mission; June 2019-Present

- Led planning and development of S-band cubesat communications system
- Secured data transmissions in conjunction with Command and Data Handling team
- Assisted systems engineering team with development of MBSE model using MagicDraw and UML

Project Manager, Overseer; June 2018- June 2020

- Assisted development of component hardware and software systems for high altitude ballooning operations
- Taught Solidworks, RF engineering, systems engineering, and other core skills to team members
- Improved design for additional mass and flight duration from previous launches
- Led high-level systems management in accordance with technical specifications
- Organized and executed high-level design reviews