

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

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|---|-----------------------------------|
| • Coding background- Python, C/C++, Bash, VBA, Mathematica, ROS | • IoT/Radio sensor networks |
| • Design- Solidworks 2019, AutoCAD Inventor | • Prototyping |
| • 3D printing and basic manufacturing | • GNURadio |
| • Assembly, Integration, and Test | • CubeSat RF Engineering |
| • CV data integration | • 4nec2 |
| | • 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 Orbit 60, Torque, and Ranger Pro condition monitoring platforms
- Formulated functional architecture flowdowns and managed requirements with systems team
- Developed VBA tools to grade existing requirements for testability

UCLA Smart Grid Energy Research Center (SMERC)

Student Researcher; February 2019-Present

- Researched knowledge transfer algorithms for development of ML-driven insurance adjustment
- Developed prototype electric vehicle charger in compliance with ISO 15118 standards
- Designed delivery drone with ROS, Solidworks, and machining to support lab objectives
- Used PyTorch and OpenCV to design autonomous driving framework

UCLA EPSS

Student Researcher; November 2019- Present

- Developed radiometric temperature sensors with USRP/SDR technology and GNURadio
- Modeled Martian surface to predict RIMFAX data prior to deployment

Bruin Spacecraft Group

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

- Led redesign of satellite system to ensure compliance with new design goals
- Signatory of Blue Dot Satellite Consortium establishment
- Restructured existing launch 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 with Matlab
- Secured data transmissions in conjunction with Command and Data Handling team

Project Manager, Overseer; June 2018- June 2020

- Assisted development of hardware systems for high altitude ballooning operations using CAD tools, Raspberry Pi, and rapid prototyping technologies
- Taught Solidworks, machining, and systems engineering skills to inexperienced members
- Improved design for over 500% payload mass and 200% flight duration from previous launches
- Led high-level systems management in accordance with technical specifications

Independent Project development

- Developed LoRa/WiFi IoT sensor network from OTS components
- Used Raspberry Pi, Arduino, and Radiohead library to develop IoT network
- Integrated custom solar power system into design to ensure off-the-grid operability
- Performed cost-benefit analysis to minimize design cost over closest competition