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

- Language background- C/C++, Bash, Java, Python 3, R, SQL
- Python libraries- Pandas, Numpy/Scipy, Jupyter Notebook, OpenCV, PyTorch
- Microsoft Office Suite
- Waterfall and Agile development
- VBA macro automation
- Git
- Linux/Unix Operating systems
- GNURadio
- Robot Operating System (ROS)

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
- Developed VBA tools to grade existing requirements for testability
- Formulated functional architecture flowdowns and managed requirements
- Coordinated with software and data management teams to refine platform requirements

UCLA Smart Grid Energy Research Center (SMERC)

Student Researcher; February 2019-Present

- Researched knowledge transfer system for testing of Machine Learning-driven insurance adjustment
- Designed delivery drone with ROS and CAD tools to support lab objectives
- Used PyTorch and OpenCV to design autonomous driving framework
- Optimized and documented existing body of code for improved readability

UCLA EPSS

Student Researcher; November 2019- Present

- Developed and optimized radiometric temperature algorithms using software defined radios and GNURadio tools
- Modeled Martian surface to predict RIMFAX data prior to instrument deployment on Mars
- Enhanced Mars 2020 Rover instrument capabilities

Bruin Spacecraft Group

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

- Developed space-based S-band cubesat communications system software and ground-based radio system with AWS Ground Station
- Secured data transmissions in conjunction with Command and Data Handling team using RSA2048 encryption
- Developed communication system testing software with SDR technology and GNURadio tools
- Assisted systems team in development of system model using MagicDraw and UML

Project Manager, Overseer; June 2018- June 2020

- Assisted development of software systems for high altitude ballooning operations with Python and Bash
- Taught fundamentals of Python and Git to inexperienced members
- Established long-term software framework for future development
- Served as git manager for club repository
- Met with subteam leadership to define software development goals
- Co-designed and launched particle-science based large dataset experiment with sister project