

Sara Schnadt

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Ground System Architect

Thinks about how to make complex systems elegant, effective, and intuitive to use. Designs software experiences and systems to enable mission operations and scientific research. Develops projects for the arts, data journalism, big data analytics, solar system exploration, and satellite imagery.

Skills

Space Ground Systems Architecture | Technical Project Management | Program Design | Strategic Planning | Project Management | Production | UX Research | UX Design | Information Architecture | UX Architecture | Visual Design | Database Design | Web Content | Grant Writing | Proposal Writing | Public Speaking

Experience

NASA Jet Propulsion Laboratory, Pasadena, CA

August 2017 - November 2024

Lead, Mission System Framework, October 2022 - November 2024

- Led design, development, and section collaborations for a reference set of mission system design resources for The Mission System Division, used as a foundational template by a range of mission classes for future cost and capability economies of scale for the lab.

Ground Data Systems Engineer, Mars Sample Return Program, March 2023 - October 2023

- Supported the Mission System System Engineer (MSSE) with detailed architecture development for the program.
- Conducted trade studies, venue infrastructure design investigations and documentation for the interface with Sample Return Lander Ground Data System (GDS), and network communications infrastructure between the missions in the campaign.

Architecture and Design Lead, Mission System Framework, February 2022 - September 2022

- Led architecture concept development for ground system architecture framework for The Mission System Division applied to a range of mission classes to support efficient and cost effective mission system development

Ops Efficiency SE, Mission Operations System/Ground Data System, Mars 2020 Mission, September 2021 - April 2023

- Worked priority cross-system systems engineering tasks with Mission Manager, MSSE and Uplink System Engineer towards ops timeline reduction including systems engineering and design for the shift start architecture for automating flow from com pass data to decisional pass identification to population of associated shift schedule data into ops tools.
- Analyzed efficiency opportunities for the coordinated target evaluation between rover planners and science operations.
- Participated in the autonomous planning working group and delivery of constraint based planning tool designs.

Crosscutting Tools Subsystem Lead, Mars 2020 Mission, May 2019 - September 2022

- Architected and oversaw implementation of a solution for capture and tracking of science intent across planning and analysis tools used by the science and science operations teams.
- Oversaw design, development and delivery of crosscutting ops tools for all teams including reporting (CACHER), shift schedule (Meeting Tracker, RASCAL), and the core tool for tracking science intent (SI Tracker). Led developer and designer team for implementation and tool maturation.

Ground Data System Human Centered Design Lead, Mars 2020, May 2019 - August 2021

- Oversaw cross-system design concerns including allocation of design resources, mentorship and team building for subsystem designers.
- Identified priority usability challenges for the GDS.
- Facilitated cross-system design coherence priorities such as development of a UI design system and coordinated research methods and documentation across subsystems.

Multi-mission Planning and Sequencing Study Lead, September 2019 - March 2020

- Led a research project to identify opportunities for cross-mission design and capability improvements, and common planning and sequencing architectures, in support of the Multimission Ground Systems and Services Program Strategic Plan and definition of the Mission Planning and Sequencing and Analysis effort.

GDS Human Centered Design Lead, Europa Clipper, August 2017 - April 2019

- Designed an architecture for model versioning and management for use in planning and simulation by science team, mission planning and spacecraft subsystems, and delivered an associated trade study.
- Led design team in the UX research and design for the ground data system.
- Participated in working group for mission's uplink reference activity plan concept.
- Led research projects to evaluate usability of science and mission planning tool sets.

Planet, San Francisco, CA**April 2016 - July 2017****Product Design Lead**

- Built and led the first design team at Planet and led UX and product design efforts.
- Lead UX researcher, designer and architect for first public platform for access to Planet's global satellite imagery.
- Oversaw design development of proof of concept interface for machine learning analysis of satellite imagery including oversight of UX and design direction for web interfaces for the company.

Data System Design and Civic Data Project Consultant**April 1999 - March 2016**

- Projects included: Unveillance, Knight News Challenge, InfluenceMapping.org, data2go.nyc, LA cultural asset map with Arts for in LA and database design for video art archive database with Video Data Bank.

Bokeh Data Visualization Toolset, Anaconda, Austin, TX**May 2015 - January 2016****UX and Software Designer**

- Created solution to simplify the tools' user interface.
- Developed strategic plans, conceptual interface and functional specs for new data visualization authoring tool.
- Developed new visual theme for software.
- Visual, information design, messaging and project management for new public-facing web site.

Earlier Experience**OpenElections.net, Washington, DC - Technical Project Manager****CensusReporter.org, Chicago, IL - Community Liaison/Designer****Chicago Dept. of Cultural Affairs, Chicago, IL, Chief Technologist, Co-founder****Education****MFA - School of the Art Institute of Chicago, Chicago, IL****Bachelor of Arts (Fine Art) - Mount Holyoke College, S. Hadley, MA**