

# Nick Wiltsie

ROBOTIC SYSTEMS ENGINEER

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## EXPERIENCE

### SENIOR INTERDISCIPLINARY SYSTEMS ENGINEER

*Amazon Robotics AI - Los Angeles, CA*

JAN 2022 - MAR 2023

Developed system requirements, concept of operations document, and FMEA for Amazon warehouses' prototype automated item intake and storage system (Stow2Pod). Performed deep-dive data analysis of one year's worth of storage events. Created Discrete Event Simulation of concept system. Implemented state diagram visualization to simplify software development and streamlined testing processes.

### ROBOTICS SYSTEMS ENGINEER

*Jet Propulsion Laboratory - Pasadena, CA*

ROBOT INTERFACES AND VISUALIZATION GROUP

MAY 2014 - JAN 2022

Robotic technology development and Mars Science Laboratory rover planning. Developed planning and visualization software for the Curiosity and Perseverance rovers. Lead developer for ArmSketch and MobSketch. Cognizant engineer for Robotic Simulations and Visualization Program (RSVP). Arm Systems Engineer for Curiosity rover.

ROBOTIC VEHICLES AND MANIPULATORS GROUP

SEP 2012 - 2015

Worked on comet surface sampling, robotic adhesion and climbing, and active vehicle suspensions. Developed mechanical design and wiring harnesses for Lemur III robot limbs. Designed and tested microspines, electroadhesives, and firmware of DROP climbing robots.

### GRADUATE RESEARCH ASSISTANT

*MIT Robotic Mobility Group - Cambridge, MA*

SEP 2010 - SEP 2012

Researched controllable robotic adhesion using magnetorheological fluid.

## EDUCATION

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

*Master of Science, Mechanical Engineering* 2012

*Bachelor of Science, Mechanical Engineering* 2010

## SKILLS

Robotics, Simulations, Mechanical Engineering, Finite Element Analysis, Discrete Event Simulation

## PROGRAMMING LANGUAGES

C++, Python, Java, JavaScript, Lua

## SOFTWARE

Matlab, Solidworks, FlexSim

## AWARDS

**NASA Early Career Public Achievement Medal** for exceptional achievement in the development of RSKETCH and the Camera Visualization Tool. (2017)

**JPL Voyager Awards** for development of RSKETCH (2017), MSL Camera Visualization and Video Toolset (2016), and automated rover planning assistance (2019).

**NASA Honors Group Achievement Award** for MSL upgrades resulting in lower mission risk and higher science return. (2020)