

# ELLIOT TRAPP

## SOFTWARE & MISSION OPERATIONS ENGINEER

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### PROFESSIONAL EXPERIENCE



#### NASA Jet Propulsion Laboratory, Software and Mission Operations Engineer

January 2019 - Present

##### Mars Sample Return Lander (SRL) Flight Software Developer

- Delivered python autocode modules to write C flight software for the SRL project enabling telemetry uplink and downlink from the surface of Mars.

##### Mars 2020 Entry Descent & Landing Visualization Developer

- Integrated orbiter telemetry, empowering the world to witness the real-time location of the MRO and MAVEN orbiters on landing night.

##### Operational Cloud Store (OCS) Cognizant Engineer

- Developed and deployed AWS infrastructure utilizing services including S3, OpenSearch, DynamoDB, APIGateway, CloudFormation EC2, ECS, and more, facilitating secure data transmission between 27 engineering teams and diverse international partners.
- Defined Infrastructure as Code (IaC) practices and produced dozens of Terraform and Serverless modules across the Europa Clipper mission, contributing to ongoing optimizations in DevOps practices and security.
- Conducted training sessions on operations topics, fostering team knowledge in system administration and cloud operations.

##### Distributed Object Manager Operational Lead

- Spearheaded the implementation of a new Ground Data System (GDS) paradigm, overhauling the command product uplink pipeline in use by 12 active flight missions.
- Led a high-performing team of 4 engineers and three cohorts of interns to provide mission-critical support for 12 flight projects, ensuring operational excellence and reliability.

#### NASA Johnson Space Center, Software Engineering Intern

August 2018 - January 2019

- Developed a sophisticated Recurrent Neural Network model to classify astronaut cognitive workload using pupillometry image data, enhancing space mission safety and efficiency.

### SKILLS



Python	Perl	Elastic/OpenSearch	S3	Cloudformation	Jenkins	Project
Javascript	Terraform	Lambda	IAM	Docker	HTML/CSS	Management
C	Serverless	EC2	APIGateway/R53	Puppet	System	Training &
Ruby	AWS	ECS	Cloudwatch	JIRA	Engineering	Development

### EDUCATION



#### Master of Science, Computer Science

2016 - 2018

DePaul University, Chicago

#### Master of Arts, Philosophy

2012 - 2015

The New School for Social Research, New York

#### Bachelor of Arts, Philosophy & Political Science

2007 - 2011

DePaul University, Chicago

### CERTIFICATIONS



AWS Advanceduser

January 2021

### AWARDS



NASA JPL Voyager Award

April 2022

NASA JPL Team Award

Sept 2022

NASA JPL Team Award

June 2022

NASA JPL Team Award

Sept 2021