

Bryce Carande

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My interest is to develop and operate technology for space systems, and to advance our understanding of the Earth. I am a generalist with a wide background in physical sciences, software engineering, and remote sensing. My recent focus has been microservice software systems and satellite mission analysis workflows. I value working on high-performing teams, and I am comfortable with roles from troubleshooting and writing code, to making technical and strategic design decisions, to coordinating tasks and providing team leadership.

Experience

Principal Systems Software Engineer	BAE Systems	Aug 2025 - Present
<ul style="list-style-type: none">Determined system requirements and developed a Kubernetes-based test infrastructure for measuring mission-specific algorithm performance (ie tracking algorithms)Technical lead on newly formed infrastructure team; identified knowledge gaps and provided team training and mentorshipIdentified and documented best practices for a mission analysis toolset, filling a gap in training materials available for new analysts		
Staff R&D Scientist	Maxar Technologies	Jan 2019 - May 2025
<ul style="list-style-type: none">Analyzed performance of the Constellation Scheduling System for Worldview operationsAssessed impacts of operational changes to satellites (GNC degradation, orbit changes, etc)Implemented a python-based analytics toolset to load, process, and visualize data across several domains.Orchestrated system tests using synthetic data to measure the effect of software and parameter changes.Lead developer and product owner for an internal-use GUI to show potential imaging opportunities for a location.		
Software Engineer	DigitalGlobe / Maxar Technologies	Jun 2016 - Jan 2019
<ul style="list-style-type: none">Engineer for an Agile-Scrum software team in the mission planning (tasking) domainResponsible for design, dev, deployment, and support of microservices in Java and Python, as well as GUIsLearned and utilized our common CI/CD infrastructure stack (GitHub, Artifactory, Jenkins, Kubernetes, AWS)		
Software Engineer	GroupHigh	Nov 2014 - May 2016
<ul style="list-style-type: none">Full-stack development of a web application for a blog intelligence platformContributed to user-facing front end (Angular) as well as distributed big-data processing back end (Java, Hadoop, Solr)Implemented a system health monitor for on-prem server cluster proactively tracking hardware health, system compute resources, automated processes, and job throughput.		
Geophysical Software Developer	MagVAR	Apr 2014 - Oct 2014
<ul style="list-style-type: none">Wrote software to automate data processing and analysis of wellbore measurements, airborne magnetic surveys, and global magnetic observatory data.		

Education

M.S. in Astrophysics	Arizona State University	Aug 2010 - Dec 2013
<ul style="list-style-type: none">Thesis research: Spectral analysis to determine stellar composition of binary exoplanet systemsPublication: Mission to the Trojan asteroids: Lessons learned during a JPL Planetary Science Summer School mission design exercise Planetary and Space Science · Feb 1, 2013		
B.S. in Engineering Physics	Colorado School of Mines	Aug 2006 - May 2010
<ul style="list-style-type: none">Senior Project: Portable calibration laser for atmospheric cosmic ray telescope		

Skills

Programming Languages: 🐍 Python, 💡 Java, 🗣️ SQL

Tools and Frameworks: ElasticStack (Filebeat, Kibana), Git, Kubernetes, AWS, Jenkins, NumPy, Pandas, GeoPandas, Shapely, Jupyter

Software Patterns: Microservices, API documentation, distributed systems, REST, Linux, Bash, Async processing