

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**

- 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 mentorship
- Identified 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**

- Analyzed performance of the Constellation Scheduling System for Worldview operations
- Assessed 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**

- Engineer for an Agile-Scrum software team in the mission planning (tasking) domain
- Responsible for design, dev, deployment, and support of microservices in Java and Python, as well as GUIs
- Learned and utilized our common CI/CD infrastructure stack (GitHub, Artifactory, Jenkins, Kubernetes, AWS)

Software Engineer **GroupHigh** **Nov 2014 - May 2016**

- Full-stack development of a web application for a blog intelligence platform
- Contributed 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**

- 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**

- Thesis research: Spectral analysis to determine stellar composition of binary exoplanet systems
- Publication: 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**

- 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