

Mathew Wheatley

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Toolbox Summary

- *Languages:* Ruby, Javascript, Typescript, Go, Python
- *Technologies:* Ruby on Rails, React, GraphQL, ANLTR, Jupyter Notebooks, Node
- *Databases:* MySQL, Postgres
- *Tools:* Git, Github, VS Code, Figma, Zenhub, Tuple

Professional Experience

Back-end Software Developer: Commerce Intelligence

(Shopify | Remote | January 2021 - Present)

- Developed parser for SQL-like query language microservice by leveraging language server protocol and ANTLR which serves as a user-friendly data interface for thousands of premium customers. This work was featured in [Shopify Editions: Summer 2022](#).
- Implementation of various features present in the query language into the backend datastore which supported the end to end user experience.
- Closely collaborated with my team as well as interfacing teams via paired programming, code reviews in a continuous integration environment, and bug-bashing sessions.
- Ensured code was adequately tested and refactored where appropriate as the codebase grew.

Propulsion Engineer III: BE-3 & BE-3U Rocket Engine Turbopumps

(Blue Origin | Seattle, WA | December 2015 - September 2019)

- Critical and timely redesign in response to life shortfall due to vibrational issues on the BE-3 liquid hydrogen turbopump turbine rotor.
- Test data trending against design analysis predictions to verify performance and integrity as well as gain insight into any shortfalls or unforeseen issues.
- Lead the design, analysts, manufacturing, integration, and test of two turbopump assemblies.
- Development of wiki to act as the single source of truth for design, block updates, procurement, schedule, and testing for the BE-3 turbopumps.
- Schedule along with resource planning of design, procurement, inspection, assembly, and integration dates for BE-3 turbopump development as well as production.
- Authoring of two executive level memorandums describing technical issues and recommended path forward.

Design Engineer: AETD Aircraft Engine High Pressure Turbine & Compressor Rotor

(General Electric Aviation | Cincinnati, OH | June 2012 - November 2015)

- Design of eight critical rotating parts in the compressor of the AETD jet engine.
- Preparation as well as presentation of numerous design reviews at various stages of design to chief engineers, management, and other top-level stakeholders such as the Air Force.
- Structural, thermal, and vibrational analysis of critical static as well as rotating hardware using the appropriate tools ranging from hand calculations, homegrown code, and finite element analysis.

Education History

- *Software Engineering Bootcamp*
 - Flatiron School (Seattle, WA)
 - March 2020 - July 2020
- *Masters of Science in Mechanical Engineering*
 - The Ohio State University (Columbus, OH)
 - September 2012 - May 2014
- *Bachelors of Science in Mechanical Engineering*
 - University of Maryland, Baltimore County (Baltimore, MD)
 - September 2006 - August 2010