


# Jonas Harvie

 <https://www.linkedin.com/in/jonas-harvie-625b84102>

 289-925-8104

 [jonasharvie@gmail.com](mailto:jonasharvie@gmail.com)

## EDUCATION

Mechanical Engineering  
B. Eng | 2014  
Ontario Tech University

Mechanical Eng. Technology  
Adv. Diploma | 2018  
Mohawk College

Casting Simulation | 2022  
Mohawk College

PT6 Turbine Engines | 2024  
Mohawk College

Machine Tool Operator  
Certificate (INC) | 2023  
Mohawk College

## SKILLS

- CATIA
- Polyworks
- Python
- ENOVIA
- VBA
- GD&T
- Microsoft Excel, Word, PowerPoint

## INTERESTS

- Video Game Design
- Aerospace
- Artificial Intelligence

## EXPERIENCE

### 3D Metrology Specialist and CAD Designer | Pratt & Whitney Canada

May 2020 – Present | MISSISSAUGA, ON

- Analyze 3D metrology data from sand and investment castings for GD&T requirements using Polyworks software
- Troubleshoot and optimize Polyworks inspections and reports
- Improve functionality and efficiency of Python and Polyworks inspection code (40% runtime reduction)
- Contribute to development of part specific inspection plans
- Manage creation, revision, and approval of CAD inspection models
- Collaborate with suppliers to improve quality, functionality, and automation
- Mentor coworkers on drafting and inspection processes
- Completed 60-hour Casting Simulation specialization training focusing on quality, efficiencies, and process limitations

### Mechanical Design / 3D Inspection | Pratt & Whitney Canada

May 2018 – May 2020 | MISSISSAUGA, ON

- Developed and co-authored game changing 3D inspection standards for FAS, MBDMI (Model Based Definition, Manufacturing, and Inspection)
- Analyzed solid models, assemblies, GD&T, and drawing specs to determine feature functionality
- Managed creation and release of CATIA inspection models of sand and investment cast parts
- Organized 3D inspection model Functionally Attributed Surface (FAS) data to ensure human and machine readability
- Created markups, revision requests, and approval routes in ENOVIA PLM software

### Mechanical Drafter and Weight Analyst (Co-op) | Pratt & Whitney Canada

May 2016 – Dec 2017 | MISSISSAUGA, ON

## PROFESSIONAL PROJECTS

Pratt & Whitney Canada

May 2018 – Present

- Developed 20+ CATIA VBA macros to streamline 3D inspection modelling
- Developed VBA tool to extract and organize CATIA drawing data in Excel
- Authored and maintained Polyworks scripts and Python tools for process automation
- Developed Python and Polyworks tool to automate camera positioning of feature screenshots for reports
- Developed Polyworks script to measure Min Gaspath Flow Area
- Developed min wall inspection process

- Streamlined model revision and release process

## ACADEMIC PROJECTS

### Casting Simulation | Mohawk College

Jan 2022 – Apr 2022

- Designed sand casting molds, simulated pouring and solidification in Procast
- Evaluated design iterations, reported findings, and proposed improvements
- Video of Simulation(30s): <https://youtu.be/7Atmg7sdCK0>

### Gearbox Design | Mohawk College

Jan 2018 – Apr 2018

- Researched gear shaft design methodology
- Managed project timeline and milestones
- Coordinated flow of information between team members
- Developed Excel shaft stress calculator for rapid design iteration
- Presented report on design decisions and final specifications

## PERSONAL PROJECTS

### Video Game Developer

May 2021 – Present

- Program games using Godot game engine and GDScript
- Manage project scope and timelines
- Test game mechanics for viability and “fun” early in development
- Implemented “Randomized Depth-First Search” algorithm to generate mazes
- Publish finished products on a digital distribution platform
- Play games here: <https://jonas-h.itch.io/>