

# COLTON MIR

## SOFTWARE ENGINEER

*Experienced software engineer with 5+ years in developing object-oriented programs, specializing in C++ for real-time and embedded systems. Skilled in delivering efficient, readable solutions that align with project goals and technical specifications.*

### PROFESSIONAL EXPERIENCE

**Software Engineer** - 03/2022 – Present

**Mastercard** - O'Fallon, Missouri



- Programmed in C++ for Transaction Switching Services, optimizing the way Mastercard connects financial institutions for debit transaction processing
- Conducted unit testing using conventional tools like GTest and niche tools like T3 & HPNonStop's Utilities to ensure code quality and functionality
- Drafted readable documentation ranging from code design to internal tool guides
- Performed technical analysis from project requirements and drafted stories for other engineers' development work
- Managed internal web application coordinating code deliveries, ensuring successful quarterly releases through cross-team communication

**Real-time Software Engineer** - 05/2020 – 03/2022

**Boeing (MQ-25 Stingray)** - Saint Louis, Missouri



- Programmed GUIs on RC-displays that control Air Vehicle Ground-Taxiing
- Reviewed reports from UX Designers & Navy personnel to draft & revise requirements based on user feedback
- Designed and produced tools to determine accurate geodesic distances/bearings/angles/etc. between global coordinates
- Supported Functional Quality Testing (FQT) and Systems Integration

### EDUCATION

**Bachelor of Science: Computer Graphics Technology**

**Purdue University** - West Lafayette, Indiana



- Dean's List & Graduated with Highest Distinction
- Graduated in 2.5 years

### PORTFOLIO PROJECTS

**Picture Grid Engagement Gift** - 2024

- Developed professional-quality drag-and-drop puzzle game with animated swapping puzzle pieces, compiled and packaged as an Android application
- Applied advanced coordinate-based problem-solving techniques to optimize tile animation and ensure smooth gameplay mechanics

**Medical Nursing Educational VR Simulation** - 2019

- Created a "Room of Errors" VR simulation for the Purdue Nursing Department
- Reverse engineered a VR point-and-teleport blueprint to create an object selection tool

**Ellipse Mobile App** - 2018

- Programmed 2D Sidescroller of rocket ship orbiting between planets in seamless elliptical trajectories
- Packaged in Unreal Engine 4, shipped to Google Play Store

### CONTACT

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### PROFICIENT SKILLS

- Object Oriented Programming in C++
- Git
- UX/UI Software Development Experience (C++ Graphics Libraries, SCOBOL)
- GTest Unit Testing & Systems Integration Testing
- Agile & Scrum Workflow
- Collaboration Tools (Rally, Jira, Confluence, Bitbucket)
- Unreal Engine 5 Android development

### FAMILIAR TOOLS

- OOP in C# & Java
- Unix & Command Line OS
- HP NonStop Utilities (Tandem, SCUP, XPRESS)
- Web Server Stack (XAMPP – Apache, SQL, PHP)
- Static Analysis Tools (Checkmarx)
- CI/CD Tools, Groovy language (for Jenkins, Jenkinsfiles)
- Splunk