Matthew Schwartz

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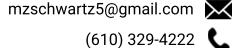## Work Experience

Amazon Web Services, Software Development Engineer   *April 2022 - Present*
• Develop Tying, a Java-based engine for automated patching and OS migration of Amazon hosts.
• Design and author integration and end-to-end load tests for the Tying engine.
• Improve dev-ops tooling and monitor service metrics proactively and in on-call capacity.
• Expand and maintain CI/CD and distributed cloud computing infrastructure-as-code.

Epic Systems, Software Developer   *August 2019 - August 2021*
• Develop and design the App Orchard website, a marketplace for third-party healthcare apps.
• Implement RESTful web APIs to expose health record data according to the HL7 FHIR standard.
• Pioneer transition of App Orchard site from MVC pattern to single-page React app.

Education

University of Pennsylvania, 2025 (expected)
• M.S. in Computer Graphics and Game Technology

Rice University, 2019
• B.S. in Computational Physics; Minor in Computational and Applied Mathematics.
• GPA: 3.88.

Projects

Personal Blog Site, https://mattzschwartz.web.app/
• A personal website, portfolio, resume, and blog built on the React framework.
• **Technologies:** React, Recoil, Typescript, Firebase, HTML, CSS, Material UI.

Game Engine, https://github.com/mzschwartz5/Game-Engine
• A home-made 3D renderer, physics simulator, and game play engine bundled together.
• **Technologies:** C++, OpenGL.

Procedural Shader Landscape, https://github.com/mzschwartz5/Shaders
• A fragment shader depicting a mountain-scape using techniques such as fractal brownian motion, raymarching, SDFs, linear transformations, and more.
• **Technologies:** HLSL, ShaderToy

Morels, https://github.com/mzschwartz5/Morels
• A two-player strategy card game built in Unity3D, playable over a LAN connection.
• **Technologies:** C#, Unity3D, Blender, Mirror Networking.

Jewel3d, https://matthatter419.itch.io/jewel3d
• A modern 3D take on the classic game Bejeweled, made in 48 hours for the Retro Game Jam.
• **Technologies:** C#, Unity3D, Blender, Garageband