

Thomas Ricci

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EDUCATION

WORCESTER POLYTECHNIC INSTITUTE

BS in Computer Science and Robotics Engineering | Expected graduation: May 2027

PROJECTS

CLOUD INFRASTRUCTURE PLATFORM DEPLOY.NEXUS

Nix & NixOS, Go, Bash, JS, TS, Docker, KVM, Qemu

Dec 2023 – Now

- Currently developing platform to allow organizations to provision their own hardware to run cloud-native applications.
- Building a declarative hardware management and provisioning system using Nix.
- Creating platform to deploy monoliths, microservices, and serverless to on-prem hardware as if it were in the cloud.

FTC 19460 CAPTAIN & DIRECTOR OF SOFTWARE ROBOTICS.XBHS.COM

Java, Kotlin, Gradle, Android, TS, JS, RoadRunner, OpenCV

Apr 2021 – Aug 2023

- Founding member of FIRST® Tech Challenge competitive robotics team 19460 & led team to Massachusetts State Championship as Finalist Alliance in 2023.
- Developed a nondeterministic finite automata to emulate multi-threaded environment using one thread.
- Built algorithms to interface with all FTC-legal hardware using declarative commands that “just work”.
- Created declarative framework to rapidly iterate upon autonomous routines using visual, inertial, and wheeled SLAM algorithms.
- Used reflection to manage execution of routines written in Java & Kotlin.

REACT METAFRAMEWORK OCTOBOX.THOMASRICCI.DEV

JS, TS, React, Vite, Node.js, ESLint, Stylelint, Puppeteer, TailwindCSS

Nov 2021 – Mar 2023

- Single-handedly developed SSG-only React metaframework similar to Next.js and Remix.
- Developed robust file-system router on top of React Location with support for code splitting, lazily-loading routes, preloading and caching routes, parallel and synchronous route loaders, route actions, document head management.
- Designed custom SSG prerenderer using Puppeteer.
- Built utility to bootstrap support for ESLint, Stylelint, SCSS, Tailwind & custom unit-testing framework.

WORK EXPERIENCE

XAVERIAN BROTHERS HIGH SCHOOL IT DEPARTMENT

IT Technician | Westwood, MA | May 2022 – Aug 2023

- Performed software and hardware installation, maintenance and upgrades.

LETGO YOUR MIND LEGO-BASED STEM PROGRAM

Summer Camp Counselor | Boston, MA | 2021 – 2022

PROFICIENCIES

LANGUAGES

Java • Kotlin • TypeScript •
JavaScript • Racket • Python •
C • C++ • Bash • Rust • BF

MARKUP LANGUAGES

TSX • JSX • HTML • CSS •
SCSS • XML

LIBRARIES/FRAMEWORKS

React • Node.js • Tailwind •
Express.js • Spigot • OpenCV
• JDA • React Router • React
Location • pandas • NumPy •
Cypress • Vite • GTK3

TOOLS/PLATFORMS

Git • GitHub • GitHub Actions
• Cloudflare • Linux • Ubuntu •
NixOS • Grub • Gradle • Maven
• pip • npm

AWARDS

ROBERT H. GRANT AWARD

Worcester Polytechnic Institute

2023 COMPUTING AWARD

Xaverian Brothers High School

2023 ROBOTICS AWARD

Xaverian Brothers High School

2022 ROBOTICS AWARD

Xaverian Brothers High School