# **Aarnav Tale**

Experienced Software and DevOps Engineer

### **Skills**

### Programming & Computer Science

- Server-side Web development with Node.js (TypeScript/C++), Golang, MongoDB, and PostgreSQL while utilizing DevOps tools and proper security practices to ship products efficiently.
- Containerization experience with Kubernetes (cluster configuration, administration, maintenance, and product deployment) and Docker workflows (including Docker Compose and Swarm).
- Developer Operations (DevOps) experience, improving workflows by utilizing Git, Continuous Integration/Continuous Deployment (CI/CD), and deployment platforms (Nginx, Vercel, etc).
- Extensive JavaScript experience, including TypeScript, ECMAScript (ES6), Deno, and tools like React, Express, and payment platform frameworks (PayPal and Stripe).
- Experience with Apple's iOS and macOS operating systems, including an understanding of internal frameworks through Reverse Engineering, software development, Objective-C, and Swift.
- Production server management, maintenance, and hardening on the Debian/Ubuntu Linux platform.
- Java, Kotlin, and .NET game development experience using libraries such as LWJGL and MonoGame.

### Collaboration, Initiative & Problem Solving

- Founder of Aerum LLC, a company with plans to expand into Educational Software.
- Actively contributed to many different open-source projects, often interacting with other developers around the world to contribute meaningful and constructive code.
- Built numerous solutions to improve my workflows and address issues in the iOS modding community (more formally known as Jailbreaking).
- Teaching abilities through offering music lessons and explaining code concepts/implementations.
- Discovering information not available through documentation or public writeups through reverse engineering with disassemblers and debuggers to solve problems.

### **Education**

## **Academy of Engineering and Technology**

June 2022 — High School Diploma / Virginia, United States

Attended High School at a research-oriented institution, allowing me to pursue advanced Computer Science techniques further and apply them to topics that interest me. Challenging classes have helped me exercise my problem-solving and innovativeness, allowing me to go beyond my education and develop skills and knowledge beyond the curriculum to enhance my education.

# **Experience**

### **Software Engineer / HASHBANG Productions**

April 2021 — Present / South Australia, Australia

- Developed software for Chariz, a competitor to Apple's App Store, built on a fully custom platform made with Node.js, MongoDB, and React.
- Managed the development of the Chariz Repository, a subset of the Chariz product that hosts products and software for Jailbroken iOS devices.
- Redesigned our deployment infrastructure, migrating our platform to Kubernetes allowing us to work more efficiently, automate deployments, and deliver a more reliable product to users.

# Samples of Work & Activities

### Software Development

- Lyricify: view song lyrics on the lock screen of your iOS device <u>chariz.com/buy/lyricify</u>
- Chariz: a commerce platform providing tools for developers to sell software <u>chariz.com</u>
- iconset: a Swift command-line-tool to manage app icons on macOS github.com/tale/iconset

#### Collaborative Work

- Grapple: a team effort at the AcademiesHacks 2 hackathon, developed in less than 24 hours leveraging MonoGame to win the *Best Game* award devpost.com/software/grappel
- Sileo: A modern package manager for Jailbroken devices <u>github.com/Sileo/Sileo</u>
- Repository Standards: A standards body focusing on improving protocols currently used by the Jailbreaking community by introducing stability and security <a href="mailto:github.com/RepositoryStandards">github.com/RepositoryStandards</a>

#### Academic & Extracurricular Experiences

- Loudoun County Public Library Volunteer: Tasked with assisting patrons, managing book-fairs, sorting books, and supporting librarians in Children's Programming events.
- Research Initiative Project: Investigated the effects of social media bias on the response to the Covid-19 pandemic within individuals and countries as a unit. Designed a solution to combat bias and misinformation in treatments, vaccinations, and preventative measures.
- Model United Nations: Conducted numerous debates in different conferences, under different committees and countries. Developed public speaking skills and went on to win gavel and chair conferences.