

# Ryan Taylor Rose

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## Experience

Bose Corporation – Cloud Engineer II October 2020 to Present

Bose Corporation – Cloud Engineer I June 2019 to October 2020

- Technical lead and contributor to parallel cross-functional projects
  - Responsible for iOS (Swift) SDKs that enable research teams to run beta software experiments
  - Drive embedded and cloud development of a multi-product experimental home audio feature
- Design, develop, test, and maintain production microservices in Go, Python, and Node.js
  - Integrate with a federated identity provider to implement an OAuth 2.0-compliant authorization server, resource servers, and example clients to support partner integrations
  - Leverage Redis caching and Pulsar pub/sub messaging to handle high-throughput asynchronous operations on behalf of IoT speakers with low latency
  - Develop React web apps for users to manage their beta enrollments and integrations
  - Implement services that safely communicate with self-registered 3rd party clients and servers
  - Design RESTful and webhook HTTP APIs and contribute to public-facing developer documentation

Expressive Machinery Lab – Graduate Research Assistant August 2017 to May 2019

- Software lead on [TuneTable](#), a tangible user interface that teaches computational concepts to middle- and high-school students through algorithmic music creation
  - Iterations employed computer vision (reactIVision), Processing (p5), openFrameworks (C++), web technologies (Web Audio API, Node.js, Electron), and Python

Bose Corporation – Software Engineering Intern Summer 2017, Summer 2018

- Created developer portal facilitating microservice deployment for nascent internal cloud platform, exposing metrics, container health, logs, and tools previously inaccessible to developers
- Architected, developed, and tested a microservice in Go managing webhook calls to 3rd parties
  - Spearheaded utilization of a new pub/sub platform and created a model client implementation for the platform in Go

## Education

Georgia Institute of Technology M.S., Music Technology May 2019

Case Western Reserve University B.S. Computer Engineering, B.S. Music – Saxophone May 2017

## Side Projects

Flame Keepers (freelance contract work) February 2021

Developer on [Flame Keepers](#), a web-based perpetual music installation. Implemented a Node.js server using AWS S3 as a cheap, minimal database and storage facility. Integrated with Airtable for user and copy management.

Chronophonics July 2020

Developer on [chronophonics.art](#), a web installation for [NIME 2020](#). Created a series of networked musical interfaces that allow collaborative editing using a combination of Go websocket server, Google Firebase tools, and MongoDB.