# Arnob Dam

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## Professional Experience

**United States Air Force, Foreign Military Sales Branch**                                    Aug 2020 - Aug 2022
**Software Engineer**
- Provided engineering support for the Qatar Air & Missile Defense Control Center teams ($1bn total portfolio)
- Developed systems' front-end and back-end APIs, utilizing Agile / SCRUM methodologies, tested 200+ requirements
- Liaised with the Qatari Air Force's engineering lead four times per year, presented current Agile status
- Provided risk management concerning cost, schedule & performance, hosted monthly risk review boards

**Washington University in St. Louis, McKelvey School of Engineering**                        Aug 2016 - May 2020
**Engineering Lab Researcher & Tutor**
- Conducted data mining and statistical analysis on 800+ datasets via MATLAB in financial engineering & operations research
- Created algorithms and mathematical models predicting financial markets' behavior
- Tutored fellow undergraduates in math, systems engineering and computer science classes, increased students' grades by 15%

**Boeing**                                                                                    Jun 2019 - Aug 2019
**Finance Intern**
- Performed financial analysis on the engineering cost of function of the 737 MAX airplane
- Submitted reports to Boeing's engineering division CFO & chief engineer theorizing 5-10% saving cuts for 737 MAX program

**Torreya Partners LLC**                                                                       Jun 2017 - Aug 2017
**Investment Banking Intern**
- Assisted acquisition of a mid-cap, $50m valued biotechnology company
- Performed financial analysis and constructed financial models via MS Excel

## Programming Skills
React.js, Redux.js, JavaScript (ES6), Ruby, Ruby on Rails, Git, API, SQL, NoSQL, PostgreSQL, MongoDB, Mongoose, Express.js, Node.js, HTML5, CSS3, jBuilder, RSpec, AWS S3, MATLAB, Java

## Education

**Washington University in St. Louis**                                                        Aug 2016 - May 2020
Bachelor's Degree (BS) in Systems Science & Engineering, GPA 3.70/4.00, Minor in Computer Science
Curriculum Highlights: Data Structures & Algorithms, App Development, Control Systems, Operations Research,
Linear Algebra, Calculus I, II & III, Probability & Statistics for Engineering, Computer Engineering

**App Academy**                                                                               Sep 2022 - Jan 2023
Immersive 80+ hr/week software development course centered around full-stack web development

## Projects

**Symphonify** (Ruby / Rails, React / Redux, JavaScript, HTML5, CSS3, PostgreSQL, AWS S3)     [Live Site](#) | [GitHub](#)
*Pixel perfect Spotify clone*
- Harnessed React-Redux single-state management to implement well-rounded CRUD functionality for playlists and user login
- Exploited Redux patterns to maintain to an ever-present music slice of front-end user interface (UI) state via the playbar
- Optimized Rails backend routes and shape of front-end state to minimize load-time for process-heavy user experience (UX)
- Engineered a real-time search feature using debouncing around a recursive algorithm, filters albums by title or artist name

**Express** (MERN Stack, MongoDB, Mongoose, Express.js, React / Redux, Node.js, NoSQL, HTML5, CSS3, Nivo)   [Live Site](#) | [GitHub](#)
*Point-of-Sale system*
- As project lead, developed and troubleshooted front- and back-end, set daily schedules for team members, led team meetings
- Implemented user auth by encrypting user details via JSON Webtoken library, wrote model level validations for credentials
- Forged RESTful routes via Express.js pertaining to menu products, categories, orders & order history
- Utilized Nivo, which is built on top of D3.js and React, to implement a ring / pie chart data visualization of the current order

**Gorillas** (JavaScript, HTML5, CSS3)                                                        [Live Site](#) | [GitHub](#)
*Projectile motion game*
- Utilized projectile motion physics, gravity,  and vector math to create the path of the banana thrown by both gorillas
- Constructed an algorithm which dictates the AI gorilla is successful with his throw 10-15% of the time
- Implemented custom object collision functions between the bananas, gorillas, and pseudo-randomly generated landscape