

# Grant Nations

Computer science and physics student.

## EDUCATION

### University of Utah, Salt Lake City — BCS Computer Science, BS Physics

FALL 2019 - SPRING 2024

- 4.0 cumulative GPA
- Student athlete on Varsity Swim and Dive, Fall 2019 - Spring 2021
- Academic Excellence full tuition scholarship recipient
- National Merit Commended Scholar

## WORK HISTORY

### KBR — Software Development Intern

AUGUST 2022 - PRESENT, SALT LAKE CITY, UT

- Assist mission logic team in the development of an autonomous Earth orbiting satellite observation system using a network of high-powered sensors (telescopes) distributed across the globe.
- Research and develop a mixed-integer programming model and near-optimal scheduler for prioritized observations of Earth orbiting satellites with the expected outcome of producing efficient schedules of high quality observations.
- Present progress and discuss future direction in biweekly team meetings.

### University of Utah College of Science — PANDA (Physics and Astronomy) Network Mentor

AUGUST 2022 - PRESENT, SALT LAKE CITY, UT

- Lead group activities for freshman students to explore their opportunities within the Physics and Astronomy department and university.
- Discuss plans with Physics and Astronomy professors to achieve the best outcome for students in the freshman seminar.

### University of Utah College of Engineering — Undergraduate Research Assistant

SEPTEMBER 2021 - APRIL 2022, SALT LAKE CITY, UT

- Assist in the research of high temperature reference electrodes for use in molten salt nuclear reactors.
- Run short term and long term OCP, CV, and EIS analysis of three-electrode cell with high-temperature salt electrolyte to determine feasibility of reference electrodes.

## PROJECTS

### Kana Shuffle — [kana-shuffle.herokuapp.com](https://kana-shuffle.herokuapp.com)

- Solves the problem of memorizing character order when practicing writing hiragana and katakana Japanese characters.
- Provides users with hiragana and katakana practice sheets that are randomly ordered on each download.
- Uses React.js, Node, and Express; Hosted on Heroku.

### Pupil — [www.aboutpupil.com](https://www.aboutpupil.com)

- Streamlined the use of hybrid classroom technology for professors and students on college campuses.
- Implemented using React, Redux, and Django; Landing page hosted on Amplify.

### Crown Clothing E-Commerce Application

- Mock e-commerce application using React, Redux, Firebase, and Styled Components.
- Implemented using different methods for handling website state, i.e. React Context, Redux Thunks, and Redux Sagas.

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[github.com/grant-nations](https://github.com/grant-nations)

[linkedin.com/in/grant-nations](https://linkedin.com/in/grant-nations)

## TECHNICAL SKILLS

### Languages

C++, Java, MATLAB, Python, C#, Javascript, Typescript, Solidity, HTML, CSS, SQL

### Frameworks/RTEs/Libraries

NumPy, Redux, React, Qt, Express, Node.js

### Tools

SolidWorks, AWS, Git, Github, Docker, CodeCommit, Firebase, Stripe, Amplify, Netlify, Heroku

## SOFT SKILLS

Creativity, communication, teamwork, problem-solving, leadership, adaptability, responsibility

## ADVANCED COURSEWORK

- Foundations of Data Analysis
  - Statistical modeling
- Algorithms
  - Linear programming
  - Parallel programming
- Software Practice I & II
  - Parallel programming
- Engineering Probability and Statistics
- Linear Algebra and Differential Equations
- Partial Differential Equations for Engineers
- Computer Security

## CERTIFICATIONS

- Mechanical Design Associate (SolidWorks), Dassault Systèmes
- Machine Learning, Data Science and Deep Learning with Python, Udemy
- Blockchain Basics, Coursera
- 2021 Complete Python Bootcamp from Zero to Hero in Python, Udemy
- The Complete 2020 Web Development Bootcamp, Udemy