

# Nathaniel Valtierra

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## EDUCATION

### Bachelor of Science in Computer Science

2019 - 2022

University of Houston – Houston, Texas

Minor in Mathematics

Overall / Major GPA: 3.8

## SKILLS

### Programming Languages:

**Python:** NumPy, Pandas, Scikit-learn, Tensorflow

**Javascript:** Node, Express, React, p5

**C/C++:** C99, C11, C++11 – C++20

**Other:** SQL, Java, C# (Unity engine), R

**Tools:** Git, Jupyter, Excel, LaTeX

## HONORS

- Dean's Distinguished Scholar's List, University of Houston
- Academic Excellence Scholarship (\$6,500), University of Houston, 2019 – 2022

## ACADEMIC PROJECTS:

### Full-Stack Web Interface for PostgreSQL Database

Spring 2021

- Designed a database using PostgreSQL to manage employees
- Created a web server using Express to query the database and send information to client via a RESTful API
- Designed a web interface using React to view and interact with the database

### Reinforcement Learning using Q-Learning and SARSA

Fall 2022

- Designed a system for multiple agents find an optimal path in a changing world using reinforcement learning, specifically Q-Learning and SARSA
- Created an interactive GUI using TkInter for Python in order to visualize the learned paths and edit the learning parameters
- Used Pandas, Matplotlib, and other Python libraries to analyze the agents' performance

## RELEVANT COURSEWORK

Data Science

Artificial Intelligence

Software Engineering

Machine Learning

Systems Programming

Big Data