

# Rithik Raja

rajarithik1703@gmail.com ❖ (813) 807-1062 ❖ [GitHub](#)

## EDUCATION

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### University of Florida

Bachelor of Science in Data Science

GPA: 3.94 (Dean's List 2022)

August 2021 – May 2025

## PROGRAMMING SKILLS

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- **Fluent:** Python, JavaScript, React.js, MySQL, HTML, CSS
- **Conversational:** C++, Java, R

## PROJECTS

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### AlgoChess (<https://algochess.xyz/>)

June 2022 – August 2022

- Created a full-stack web application that enables peer-to-peer wagering over a game of chess.
- Utilized React.js for the frontend, and Node.js, Express.js, and MySQL for the backend.
- Integrated game functionality using Lichess's public API.
- Utilized middleware to protect backend API endpoints from CSRF attacks.
- Received 3<sup>rd</sup> place among over 80 participants in a hackathon.

### Neural Network from Scratch (<https://github.com/imfeelingitchy/digit-classifier-hardcore>)

January 2023 – February 2023

- Coded a Multi-Layer Perceptron (MLP) neural network using just Python and NumPy (no ML libraries) by implementing the feed-forward, backpropagation and Stochastic Gradient Descent (SGD) algorithms using matrix algebra.
- Trained the model on the MNIST dataset to recognize handwritten digits.

### Data Organization Tool

September 2021 – October 2021

- Lead developer in a team that delivered a software solution for an overseas company, Construtora SAM.
- Wrote Python scripts to scrape their Telegram group chat, filter keywords and images, and organize the same in a MySQL database.

### Browser Game Automation (<https://github.com/imfeelingitchy/auto-basketball>)

June 2022 – July 2022

- Created a Python script that uses computer vision using OpenCV, mouse automation, and multithreading to automatically play a game involving catching basketballs in hoops with perfect precision.

### Minesweeper (<https://github.com/imfeelingitchy/minesweeper>)

November 2021 – December 2021

- Used C++ and the SFML library to create a desktop version of the classic Minesweeper game.

## EXPERIENCE

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### Teaching Assistant: STA2023 – Intro to Statistics

August 2022 – Present

University of Florida

- Facilitated practical learning of core concepts via lab sessions.
- Conducted biweekly office hours in order to assist students in their learning objectives.
- Graded weekly assignments for a class of over 120 students.

### Webmaster: Multicultural Greek Council

#### Chapter Secretary: Beta Chi Theta National Fraternity

January 2023 – Present

University of Florida

- Coordinated with multiple Greek organizations to maintain a comprehensive and up-to-date website.
- Organized meetings, scheduled events, and maintained records of internal affairs.
- Aided in the conceptualization and execution of various service events.

### Individual Contractor – Web Development

October 2022 – November 2022

Yieldly Pvt. Ltd.

- Integrated a new API into a React.js codebase of over 30000 lines of code.
- Overcame issues with legacy dependencies by forking and them and publishing custom versions to the npm registry.