

# APAR POKHREL

Irving, Texas

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## Education

### The University of Texas at Arlington

*Bachelor of Science in Computer Science*  
*Minor in Mathematics*

May 2022

GPA: 3.81/4.0

## Technical Skills

**Languages:** C/C++ (3 years), Python (2+ years), JavaScript, Java, Matlab, MySQL (< 2 years)

**Tools:** VS Code, Git, GitLab, Jira, Postman, Virtual Box

**Technologies/Frameworks:** Windows, Linux, ReactJS, Bootstrap, NodeJS, Keras, Sklearn, Pandas

## Experience

### Peer Academic Leader

August 2021 – May 2022

*University of Texas at Arlington*

*Arlington, Texas*

- Supervised and instructed three UNIV freshmen courses for the College of Engineering and Science.
- Individualized lesson plans for an average class size of 30 students on academic and student affairs policy, social opportunities, major exploration, engineering practices, and other areas of academic success.
- Maintained official university course records and documented progress of 100+ students using Canvas LMS.

### Programmer Analyst Intern

January 2018 – August 2018

*Smart Krishi*

*Kathmandu, Nepal*

- Contributed to designing API services to automatically fetch daily market prices of agricultural products and tools.
- Added an *Agro Library* feature to allow users to explore information on livestock data, 1k+ diseases, agro-tools, and best agricultural practices. Integrated live Q&A within the mobile app to connect local farmers with agricultural experts.
- Analyzed market insights of 200k users from social media platforms and mobile app using Google Analytics.
- Researched literacy rate within rural communities and advocated for local language addition to support 35% of users.

## Projects

### The Drowning Robots | C/C++, Python, ReactJS, Raspbian

August 2021 - May 2022

- Collaborated on designs and build for an underwater ROV with a \$800 budget for the IEEE Robotics Competition.
- Gained Agile SDLC methodology experience through daily scrum meetings, project planning, requirements elicitation, sprint backlog, and peer review and testing.
- Designed a ReactJS web application to allow users to control the depth and movement of the robot and added wireless video streaming. Serial communication was integrated with Axios API.

### Disney Movie Dataset | Python, Google Colab, BeautifulSoup

May 2022

- Utilized web scraping to extract Wikipedia's Infobox contents from 600+ Disney movies using the bs4 library.
- Cleaned and filtered data to create a final dataset which houses 520 Disney movies and generated GET requests to attach IMDB/Rotten Tomatoes ratings using OMDb API.

### Traffic Signs Classification and Recognition | Python, Keras, Tensorflow

August 2021 - December 2021

- Trained a deep neural network that can classify traffic signs from the GTSRB dataset having 50,000 images.
- Classified images into 43 relevant classes using a LeNet CNN model with a training accuracy of 98 % .
- Created a simple GUI using Tkinter that predicts the class of traffic sign based on a user image.

### Anime Search | ReactJS, SCSS, Rest API

March 2021

- Deployed a website on GitHub pages by utilizing React hooks, props, and components and added styled sheets to improve User Interface.
- Utilized asynchronous function to fetch top 10 popular anime and integrated search functionality to display the top 50 results matching an anime query using JikanAPI.

### Operating Systems | C/C++

August 2020 - December 2020

- Implemented a user space shell application capable of reading, traversing, and interpreting a FAT32 file system image.
- Created a program with custom implementation of malloc and free functions to perform heap management using 4 different page replacement algorithms.
- Designed a bash shell to handle user commands and included ability to store 15 historical commands and process IDs.
- Installed a new Linux kernel image and modified it to support 3 new system calls and display statistics of a process ID.