

RICHANSHU JHA

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Skills

Languages: Python, JavaScript, C/C++, Java, R, PHP, HTML, CSS

Full-Stack Technologies: jQuery, Flask, NodeJS, ExpressJS, Angular, React, Bootstrap, AJAX, Socket.io, REST APIs

Data and Machine Learning: MongoDB, MySQL, JSON, OpenCV, PIL, Tensorflow, Keras, PyTorch, NLTK

Cloud Technologies (AWS): API Gateway, Lambda, S3, Athena, QuickSight, DynamoDB, CloudFront, Sagemaker

Experience

Aegean AI

July 2020 - August 2020

Computer Science Intern

Parsippany, NJ

- Designed the architecture of a highly scalable serverless SaaS web app using **AWS Lambda, API Gateway, S3**.
- Led the full-stack development of the web application using **HTML, CSS, JavaScript, Python, DynamoDB**.
- Created modules across the tech stack of the application currently being used by 7000 university academics.

ValueLabs

January 2019 - April 2019

Software Development Intern

Hyderabad, India

- Developed 15+ front-end modules using **HTML, CSS, jQuery, Angular**, for an insurance aggregation platform
- Fixed a long-term critical data-flow error affecting 40% user flows through the site using **Struts** and **Java**
- Build **Javascript** extensions to the **jQuery** UI library for the platform to fix long-standing cross-platform issues

Hexagon Geospatial

June 2018 - July 2018

Software Engineer, Machine Learning Intern

Hyderabad, India

- Designed, tested, and optimized convolutional machine Learning models using **Tensorflow** with **Keras**
- Automated the data extraction pipeline to increase data generation rate from 60 to 1200 data-points/hour using **Python, Javascript, HTML, CSS, Google Maps APIs** and tools such as **OpenCV, PIL**
- Created a context-sensitive HR chatbot for the organization using **Python, React, Flask, PyTorch, MongoDB**
- Built a custom PDF Parsing library with **Python** to automate the data extraction for the HR chatbot.

Projects

Virtual whiteboard and Foreground extractor

Python, OpenGL, OpenCV

- Developed a **Python** application that creates a virtual whiteboard, the cursor being a point light source
- Created a module that takes web-cam input from the program and masks out the background from the video

Restaurant seat booking and ordering platform

HTML, CSS, Javascript, PHP, MySQL, AJAX

- Developed a seamless web application that allows users to reserve restaurant seats with visual selection
- Led the development of a cross-platform ordering component to the application using **PHP** with **AJAX**

Surface Type Classification and Continual Learning

Python, Pytorch, Pandas, Numpy

- Analyzed sensor data from a mobile robot and trained a ML model to classify the type of surface in real-time
- Implemented elastic weight consolidation using **PyTorch** for lifelong learning, increasing accuracy by 25%

Car Rental single page web application

MongoDB, ExpressJS, AngularJS, NodeJS, HTML, CSS

- Developed a **MEAN stack** single page web application allowing users to sign in and apply to rent vehicles

3D Battleships Game

Python, Tkinter, PyGame, OpenGL

- Recreated the classic board game 'Battleships' in **Python** using **OpenGL** wrappers

Reconstruction of human skull from MRI data

Python, OpenCV, OpenGL, Snake Segmentation

- Implemented a program that performs segmentation on MRI images to display a 3D slicable view of the skull

COVID Controlled entry web-app

Python, MongoDB, Heroku, HTML, CSS, jQuery

- Created a single page web-app allowing users to request and receive controlled entry into workspaces.

Education

New York University

September 2019 - May 2021

MS in Computer Science (GPA: 3.70)

New York, NY

Manipal University Jaipur

August 2015 - May 2019

BS in Computer Science (GPA: 8.84/10)

Jaipur, India