Biraaj Rout

bxr1886@mavs.uta.edu | [LinkedIn](#) | [GitHub](#) | 682-372-6989

EDUCATION

The University of Texas at Arlington   MS Computer Science, August 2022 - Present

Dr Ambedkar Institute of Technology, Bangalore   B.E Computer Science, CGPA-8.82/10, June 2018

TECHNICAL SKILLS

Languages: Python,C, C++, HTML, SQL, CSS, Java, Shell Script, Javascript
Databases: MySQL, MongoDB
Frameworks: Vue.js, Angular, Numpy, Tensor Flow, Panda, Flask, Keras, PHP, GraphQL, WebRTC, Matplotlib, Django, Angular 8, Bootstrap
Tools: AWS EC2, AWS Lambda, Apache Airflow, Shaka Packager, Visual Studio, Git, Heroku, MS Office
OS: Windows, Unix

VOLUNTEERING EXPERIENCE

Member, Bharat Gyan Vigyan Samiti (BGVS)   JUNE 2017 - JANUARY 2020

- Being involved in a national organization, I got an opportunity to serve the Data-Driven Governance (Last-Mile Linkage) project of BGVS at Basta and Baliapal blocks of Balasore district in Odisha to work on village development and promote various social security schemes by Tata Trust as well as district administration.
- Served in Sneha Sampark Project backed by UNICEF as a volunteer in Puri district of Odisha in response to FANI cyclone for children's psychological counseling.

Scout, Bharat Scout, and Guide   JANUARY 2006 – AUGUST 2009

- Served affected people after flood situations in 2006 and 2008 by providing food and clothes and stabilizing after the crisis.
- Involved in it during high school and worked alongside multiple events to deliver them smoothly.

Member, Muvi Foundation   MAY 2020 – JULY 2022

- Worked in a team providing basic food and clothing to underprivileged section of society in Godibari village, Bhubaneswar, Odisha. I also was involved in installing solar panel set up at an old age home in Rasulgarh, Bhubaneswar.

PROFESSIONAL EXPERIEINCE

Muvi Entertainment Pvt. Ltd, Bhubaneswar - *Software Engineer*   MAY 2020 – JULY 2022

- Developed Muvi Live Server. It is a system that creates a new AWS EC2 instance having certain Nginx RTMP Configuration facilitating one-way live streaming, reducing the server launch time.
- Researched two-way live streaming using WebRTC and developed a basic application using WebRTC with STUN/TURN servers following a mesh approach enabling ten concurrent users to have direct video conference from the browser itself.
- After receiving a considerable amount of Audio and Video data from Muvi Live Server, we are currently experimenting with analyzing data obtained from various Livestreams using multiple Deep Learning python libraries.

Deepcompute Software Pvt Ltd, Bangalore - *Associate Software Engineer*   AUGUST 2018 - AUGUST 2019

- Developed End-to-End Entity Extraction and Phrase Generation pipeline for competitive intelligence app and clinical trials application. Used python as the primary programming language and created a server cluster using Apache airflow for the tasks.

- Made an API to get search results from Bing search and feed it to an automated crawler working in a team of two. It also contributed to the development of the automated crawler.

Libre Wireless Technologies India Pvt Ltd, Bangalore - *Software Engineering Intern*   JANUARY 2018 - MAY 2018

- Worked along with my mentor to integrate amazon Alexa C++ SDK in various devices such as Soundbars and Smart Lights, and performed extensive research on the topic and got the opportunity to code in C++ for multiple parts.

ACADEMIC PROJECTS Aug 2014 - June 2018

Handwriting Recognition Using Convolutional Neural Network   JANUARY 2017 - AUGUST 2018

- Developed this project in python using tensor flow and Keras to recognize various handwriting patterns in English and convert them into a digital entity that can be stored. It had success on handwritten numbers and was decent in identifying letters with specific handwritten patterns belonging to a few relevant persons.

Teacher's Vault   AUGUST 2017 - JUNE 2018

- A windows application built using C#, .net, python, and MySQL runs over institutes intranet to store information related to professors' research works and performs analytics. It was useful as it addressed the need for centralized storage of research work and organized them as well as provided real-time access and analytics.

Earthquake Detection and Analysis   AUGUST 2016 - JANUARY 2017

- Implemented this mini project being inspired by a documentary called "Witness: Disaster in Japan." The project was built using Arduino Uno with multiple sensors to detect motion, vibration, tilt, and temperature during an earthquake. The data generated were analyzed, and Liner regression was used to predict future earthquakes as per timeline data.

RESEARCH PAPER

COVID-19 Vaccination Twitter Data Analysis for India (International Journal of Research in Engineering and Science (IJRES), Vol 09, Issue 11, ISSN - 2320-9364, Page no 62-69.)
- Extracted Twitter data and analyzed public reaction on different vaccines released in India. Visualization such as word cloud and vaccine timelines are provided. This would help vaccine manufacture get a real-time response.

CERTIFICATIONS, WORKSHOPS, AND AWARDS

- **DAT210x: Programming with Python for Data Science** (Issued by edX and Microsoft in August 2016)**:** A three-month course consisting of basics of data science and ML algorithms with multiple projects. I completed this course with a score of 73%.
- **C-Debugging (ELECTROTECH-2K16, DR AIT)** (Issued by AIT in October 2016)**:** Secured First place in this programming competition.
- **Machine learning and data analytics: A New Frontier** (Issued by AIT in January 2018): This workshop trained me on machine learning implementations over medical data.
- **Artificial Intelligence Foundations: Machine Learning** (Issued by LinkedIn in November 2021)**:** This gave an insight into AI basics and its application different scenarios like e-commerce, health care and so on.
- **Machine Learning with Python: Foundations** (Issued by LinkedIn in November 2021)**:** This course trained me to use different ML algorithms by programming in python.
- **The Data Science of Healthcare, Medicine, and Public Health, with Barton Poulson** (Issued by LinkedIn in November2021): This course helped in understanding analytics aspect of Healthcare data.
- **Muvi Power Performer (August 2021 & June 2022):** Award received for reducing the live streaming server launch time by 50% and completion of Vue.js integration for Muvi Live.