

Deepti Mahesh

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EDUCATION

University of Colorado, Boulder
Masters in Computer Science

August 2022 –
Boulder, USA

International Institute of Information Technology, Hyderabad
B.Tech in Computer Science | Honors

August 2017 – May 2021
Hyderabad, India

- Editor (2019-20), Writer (2017-2020) at College Magazine, Ping!
- College Sports Coordinator (2018-19)
- Mentor for Incoming Freshmen (2018)

EXPERIENCE

Couture.ai

AI Platform Developer

June 2021 – June 2022
Bangalore, India

- Involved in automating a ML workflow platform to generate analysis of large data and corresponding visualisations. Developed a feature-rich environment for building and running models whilst monitoring each step including resource-adaptive scheduling, analysis and hyper-parameter tuning of tasks.
- Aided in adapting the platform to scaling and serving infrastructure (EKS with EFS for persistent storage) from Docker and managing production releases.
- Integrated SSO with Okta and Azure AD, Mesh Management with Kiali and centralized security for key management, encryption, PKI system and secrets storage with Hashicorp Vault.
- Docker | Kubernetes | Python | React JS | Git

StanceBeam

Computer Vision Intern

May 2020 – Aug 2020
Bangalore, India

- Designed & built state-of-the-art, deployable models for detection of events in cricket and statistical analysis of the same aiding learning at cricket academies.
- Involved annotation of large data, audio and video analysis, & developing working algorithms with reference to academic literature.
- Implemented Python-Azure stack for deploy capabilities.

Cognitive Science + Computer Vision Lab

Research Intern | Honors

July 2019 – May 2021
Hyderabad, India

- Worked on novel developments in Kin Detection & Correlation wrt face matching algorithms and human observations. Utilised LIME and perturbations for Interpreting ML for Image Classification & Similar features.
- Python | pytorch | Tobii Eye Tracker and Studio

Happiest Minds Technologies

Data Analyst Intern | Developer

May 2019 - July 2019
Bangalore, India

- Worked on Business Intelligence, Machine Learning and Explainable AI on a dataset and used tools such as Plotly Dash to create a dashboard for a visual demo of ML Workflow.
- Involved interpreting of results obtained through ML models with the utilisation and understanding of libraries such as LIME, Eli5, etc.

HACKATHON | OSS

- **Games for Good by Indo-American Consulate | GameJam** Won Best Design WorkFlow (C#)
- **IIIT Gameathon: Level Up!** Won Best Design and Art (Unity, C#) and stood 4th out of 20 teams
- **Outreachy Application | Mozilla Firefox** Worked on Federated Learning loss function to Optimise Search

PROJECTS

2020 | Terrain Generation

Computer Vision | Independent Study | ML

Utilizing Conditional GANs and CNN + QGIS for generating a smooth Digital Elevation Model from a sparse sketch containing network of rivers, ridges and altitude cues as the only input.

2020 | Implicit Decoder

CV Final Project | pytorch

Implemented GAN, CNN encoder, decoder for better Generative Shape Modeling such that network learns Implicit Fields. Based on paper published in arXiv 2019.

2020 | Computer Vision & Image Processing

CV Algorithms | openCV, pytorch, numpy

Implemented Segmentation, Flood-Fill algos, Instance Detection and Tracking, CNN network, Optical Flow and Stereo Rectification for various applications.

2019 | Painterly

Digital Image Processing | openCV, numpy

Workflow and algorithms implemented to convert a picture into a painting characterized by brush strokes of varying size and type.

2019 | Tic Tac Toe Bot

Artificial Intelligence | Python

Bot built using min-max algorithm and alpha-beta pruning to anticipate moves from opponents with a specific strategy and optimise to win.

2019 | Shell | Proxy Server

Operating Systems | Computer Networks | C++ | Python

- Created a shell to mimic Bash (Linux) handling commands such as ls and cd through system call. Also supports features like piping and I/O redirects.
- Implemented a HTTP proxy server via python socket programming with caching, blacklisting and authentication. Includes multithreading support enabling the server to handle many requests at the same time.

2018 | Project @ IIIT Product Labs

Application Development

- Led a three person team in building a POC using LTRC and Google Translation APIs to translate patient informed consent forms into regional languages for medical trials.
- Implemented the frontend features and backend server using ReactJS and Python

2018 | Game Development

OpenGL | C++ | Python

2D & 3D Games Implemented: Mario on Terminal, Subway Surfers clone, Flight Simulator, and Jetpack Joyride.

SKILLS

Operating Systems:

Linux (Ubuntu, Kali), MacOS, Windows

Languages:

Python, C++, Java, C, C#, Bash, Elm (Functional)

Databases:

CosmosDB (Azure), MySQL

WebDev:

React, Flask, HTML5, JS, CSS

Libraries & Platforms:

pytorch, tensorflow, pandas, openCV, numpy, matplotlib, scikit-learn, scipy

Tools / Other Software:

Git, Docker, Kubernetes, Vim, Adobe AE & PS, Unity, Blender, \LaTeX