

Deepti Mahesh

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EDUCATION

University of Colorado Boulder

Masters in Computer Science

August 2022 – Present

Boulder, USA

International Institute of Information Technology, Hyderabad

B.Tech in Computer Science | Honors

August 2017 – May 2021

Hyderabad, India

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

EXPERIENCE

Couture.ai

AI Platform Developer

June 2021 – June 2022

Bangalore, India

- Automated ML workflow platform to generate analyses of large data and visualizations. Developed a feature-rich environment for training models while engaging in resource-adaptive scheduling and hyper-parameter tuning of tasks.
- Adapted the platform to scaling and serving infrastructure (EKS with EFS for persistent storage) from Docker and managed production releases.
- Integrated SSO with Okta and Azure AD, Mesh Management with Kiali. Established a centralized security for key management, encryption, PKI system, and secrets storage with Hashicorp Vault.
- Employed tools and software namely Docker, Kubernetes, Python, React JS, and 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.
- Annotated a large amount of data, and performed audio and video analysis of these clips. Developed working algorithms with reference to academic literature.
- Implemented a Python-Azure stack for deploy capabilities.

Cognitive Science + Computer Vision Lab

Research Intern | Honors

August 2019 – May 2020

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.
- Employed Pytorch and Tobii Eye Tracker and Studio throughout the study.

Happiest Minds Technologies

Data Analyst Intern | Developer

May 2019 – July 2019

Bangalore, India

- Considered Business Intelligence, Machine Learning and Explainable AI on a dataset and used tools such as Plotly Dash to create a prototype 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.

HACKATHONS

- IIIT Gameathon: Level Up! (2019) - Led a team of three in designing a game from scratch. Won Best Design and Art (Unity, C#) and stood 4th out of 20 teams.
- Games for Good by Indo-American Consulate | GameJam (2018) - Won Best Design WorkFlow (C#).

PROJECTS

Terrain Generation

2021

Computer Vision | Independent Study | ML

- Implementing Image-to-Image Translation with Conditional GANs for generating a smooth Digital Elevation Model from a sparse sketch containing a network of rivers, ridges and altitude cues as the only input.
- Developed erosion, level-set and river-network synthesizers with the help of pysheds library and QGIS to aid in training and modelling.

Implicit Decoder

2020

CV Final Project | pytorch

Implemented a GAN, CNN auto-encoder and decoder for better Generative Shape Modelling (arXiv 2019). The network learns Implicit Fields resulting in shapes with better visual quality compared to other methods.

Computer Vision & Image Processing

2020

CV Algorithms | openCV, pytorch, numpy

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

Painterly

2019

Digital Image Processing | openCV, numpy

Created a workflow and applied algorithms to transform a picture into a painting characterized by brush strokes of varying size and type.

Tic Tac Toe Bot

2019

Artificial Intelligence | Python

Led a team in building a bot using min-max algorithm and alpha-beta pruning to anticipate opponents with a specific strategy and optimise ours to win.

Shell | Proxy Server

2019

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 piping, I/O redirects, etc.
- Executed a HTTP proxy server via python socket programming with caching, blacklisting and authentication. Includes multithreading support enabling the server to handle multiple requests.

Project @ IIIT Product Labs

2018

Application Development

- Built a POC using LTRC and Google Translation APIs to translate patient informed consent forms into regional languages for medical trials.
- Developed frontend features and backend server using ReactJS and Python.

Game Development

2018

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

Web Development:

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