

VILAL ALI

Designing Robust Systems & Crafting Reliable Code

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EXPERIENCE

Sr. Software Engineer & Product Lead

IHub Data, IIIT-H

- Feb 2023 – Ongoing Hyderabad, IN
- Led a team of 5+ peers in successfully releasing multiple versions (Tips 3.0 to present) of the Core Platform Datafoundation System.
- Deploying and integrating Machine Learning Challenges Platform with the Data Foundation System. I integrated this as microservices and release successfully version Tips 3.0.
- Deploying and integrating Histopathology Viewer with the Data Foundation System. I integrated this as microservices and release successfully version Tips 3.0.
- Provided leadership as a Subject Matter Expert (SME) in addressing hosting issues, managing client and staff logins, and overseeing general upgrades/maintenance of servers.
- Created detailed technical documentation for proprietary software, facilitating efficient orientation for new employees and streamlining presentations to prospective clients. Reduced preparation time for initial/set-up meetings by 50%.

Sr. Software Engineer & UI/UX

eBhasha Setu, CIE, IIITH

- April 2019 – Feb 2023 Hyderabad, IN
- I worked on developing, deploying, and maintaining various tools. I increased the accuracy of an HMM-based transliteration system for Urdu-Hindi machine transliteration, which Rekhta now uses for their transliteration system.
- I worked on the SWAYAM project, MHRD, where we designed Videozaar, a video transcript generation and editing platform with subtitle synchronization support for multiple Indian regional languages.
- Led a cross-functional team of 4+ peers in the successful development and release of the Avatar OCR Translation System for the Bhashini Challenge, organized by the Ministry of Electronics and Information Technology, Government of India. Spearheaded the creation of a multilingual document digitization tool aimed at digitizing and translating government communiques in regional languages. Utilized in-house tools including indicOCR (an OCR API developed by CVIT) and SWAYAM MT (a NMT by LTRC). Took charge of system architecture design and documented Architecture Decision Records. Achieved 1st prize in the competition.
- The technologies employed here include Python, SciPy, NumPy, Pandas, Django, Flask, JavaScript, MySQL and MongoDB.




Research Intern

CVEST Research Center, IIITH

- Sept 2018 – April 2019 Hyderabad, IN
- Created Desktop application using electron JS, HTML, and CSS.
- Created a Flask-based full-stack website for CVEST.
- Designed back-end and front-end structures for the Desktop application will be installable for Debian-based Linux OS.

github.com/vilalali linkedin.com/vilal-ali

ACHIEVEMENTS

-  **Winner of Bhashini Challenge, 2024**
Government document digitization in regional languages.
-  **Outstanding Performance Award at IHub Data, 2024**
Improved code efficiency & quality.
-  **Best Engineer of the Year, eBhasha, 2023**
For designing a scalable system

STRENGTHS

Time Management

Motivator & Leader

High Level System Design

Data Science

Python, Flask, Django

UI/UX

NGINX

Numpy, SciPy, Pandas, Scikit-Learn

C, C++

ReactJS, Java Script

NodeJS, ExpressJS,

MySQL, MongoDB

Tailwind, Flowbite

Git

Figma

Linux

Docker

DevOps

EDUCATION

PGSSP in System Software Development
IIIT Hyderabad
July 2020 – Dec 2020

PGSSP in Software Engineer
IIIT Hyderabad
Jan 2024 – May 2024

M.C.A Master in Computer Application
Institute of Engineering & Technology
Aug 2012 – May 2015

B.Sc. in Computer Science
Lucknow University
July 2007 – May 2010

LANGUAGES

English

Hindi

Urdu

Computer Science Lecturer

Unity Pvt. ITI

📅 Sept 2014 – Sept 2018

📍 Lucknow, IN

- Conduct lectures and training sessions to help students.
- Assign assignments to students on individual levels.
- Make exam papers for mid and end semester exams.

Project Coordinator

e-Brain[S] Tech.

📅 July 2013 – July 2014

📍 Lucknow, IN

- Guide students on their final year projects at BCA and MCA level.
- Taught C and C++ at BCA and MCA level.

PROJECTS

Urdu-Hindi Machine Transliteration using HMM, Giza++

- Creating the Parallel Corpora and training the System for Urdu-Hindi Machine Transliteration Engine.
- Worked with Statistical Machine Translation (SMT) and HMM.
- Perform preprocessing and post-processing on data and improve the accuracy of the model up to 98% on the word level.

Sampark Pipeline for Hindi to Urdu

- Assembled sampark pipeline using 18 ILMT modules.
- Set up a dashboard for validating the result of each module.
- Write a shell script and a python script.

Text Processing: PDF2Text

- Designed and deployed the web application for pdf-to-text extraction.

Text Processing: Image2Text/OCR

- Setup Tika Server and tesseract on Linux system.
- Create an API for that setup and designed web application.
- Integrate the APIs individually with the web.

REFEREES

Prof. Krishna Reddy P.

@ IIIT Hyderabad

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📍 Gachibowli, Hyderabad-500032

Dr. Pawan Kumar

@ CEO, Expert Software

✉ hawhawai@gmail.com

📍 Noida, NCR

Dr. Rashid Ahmed

@ CEO, eBhashaSetu

✉ rashid@ebhashasetu.com

📍 CIE, IIITH, Gachibowli

Audio/Video Transcription Tool: Videozaar

- Built a web application using ASR engine to transcript the task.
- Write a FASTAPI to convert video into the audio format in the required format.
- Integrate ASR APIs with the Videozaar.

Subtitle Synchronization

- Built a web application for synching the subtitle with the video for Indian Regional Languages.

Web Application Development

📅 Technologies Flask, Django, Nginx

- Designed from scratch using Python, Flask, and Django and deployed the application on the server using apache2, nginx. Integrated Payment gateway APIs of Razorpay.
- Linguistic Society of India
- CVEST IIITH
- WinEducate
- Scholars' Nest School