AKSHAY KALUCHA

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Skills

Languages

English | Hindi | Punjabi

Programming

Python | Javascript | Java
C++ | Sql

Softwares

Reactjs | Nextjs | Nodejs | Gatsby
Django | MongoDB | Postgresql
MySql | Redis | Git | Docker
Heroku | AWS

Design Tools

Figma | Sketch | AdobeXD | Proto io

Hobbies

Writing | Cricket | Public–Speaking

Soft Skills

Teamwork | Leadership

Education

University of Delhi, Delhi, India

Bachelor of Science -
Computer Science July 2018 - Present

Darshan Academy School, Delhi, India

Class XII (CBSE AISSCE) - %age:
88.5% 2016 - 2018 (PCM-IP)

Class X (CBSE AISSE) - CGPA:
7.6 2015 - 2016

UG Courses

Matrices & Calculus

Professional Experience

Intellify - *Software development Intern*: **(View in Portfolio)**
Dec 2019 - May 2020
Intellify is an educational initiative set up at IIT Delhi reaching 100 cities, more than 65000 students & 1500+ teachers.
- Utilized ad hoc functions and classes provided by TF-Slim to deal with datasets. Used Python, SQL & javascript to undergo making API calls in the context of the browser's session is a common use case.
- Capturing browser cookies to make authenticated calls from Postman App, Capturing HTTP requests from the browser and saving them to Postman's History *or* Collection.
- Implemented different kinds of inputs and used different architectures to deal with them, uses REST API architectural style agile environment utilizing a test-driven development approach for designing & DevOps in networked applications, features like OTP based login system, JWT Auth, sessions, google ReCaptcha and Push-Notifications for android app users along with configuration for MySql on AWS-RDS.

Wilson Digital Pvt. Ltd - *Research Intern (part-time)*

May 2019 - July 2019
- Developed an application (in Python) to use a tree-based learning algorithm to model the deadline hit and miss patterns of periodic real-time tasks. The algorithm used formal verification techniques to generate a regular language-based guarantee to predict future deadline hits and misses.
- Detection of headlines in document images with black runlengths and OCRopus performance evaluation in detecting headlines, outperformed traditional feature-based visual localization algorithms, especially in data-contort regions.

DU-Bulletin - *Full-stack dev Intern*

Nov 2018 - April 2019
- Writing E2E, integration and unit tests & Provided infrastructure and integration guidelines for load-balancing and web farm deployment.
- Utilized unit testing infrastructure in a web app that reduced the number of bugs reported by the client by 11% month over month.
- Develop & validated testing schedules, addressing all browsers and devices to ensure various users can access the content.

Projects View in Portfolio

Automated Image Captioning using Vision Transformer
Feb 2021
ViT in PyTorch breaks an input image of 16×16 to a sequence of patches, just like a series of word embeddings generated by an NLP Transformers. Because transformers operate in self-attention mode, and they do not necessarily depend on the structure of the input elements, which in turn helps the architecture to learn and relate sparsely distributed information

Complex Analysis & Differential Equations Probability Theory & Random Processes Data Structures and Algorithms & Data Structures Database Management Systems Android programming (ongoing) Networks and Protocols Python & Java Programming

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Other Courses

Embedded & IoT: *Indian Institute of Technology, Kanpur*

Statistics with Python: *University of Michigan*

Achievements

Extempore
March 2018
Bagged 3'rd position zonal level extempore event organized by CBSE, spoke on the importance of advertisements in the digital world.

Science Fair
September 2017
Qualified regionals for building & Designed a scalable water harvesting system that stores water in multi-story buildings. Utilized Blender-3d to model the actual prototype, intensively worked to collect & map data regarding water loss in urban areas.

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more efficiently

PictureSkew - *Monitor real time CCTV data & adjust store settings using Embedded Systems(IoT).*

Dec 2020 - Present
The aim of the project is to build an open-source powerful Human-Computer emotion analyzer platform for research in the field of smartfying Indian general stores. Various deep learning and computer vision algorithms are being implemented on the IoT hardware including person tracking, gesture control using human pose estimation, and depth estimation using monocular vision. The device will capture customer movement & regulate the surrounding environment of the store like lighting, air-conditioning & data will be further transferred to ThingSpeaks, Google-cloud for real-time visualization.

Ai Hashtags — *An app to get precise hashtags based on what's on your picture(Beta phase)*
May 2019
Using the Clarifai API, it recognizes what's on the picture and returns accurate hashtags to copy and store them for reusability, application allows you to upload an img by its URL, then Clarifai analyzes the image and auto-generate relevant hashtags. With a click of a button, the hashtags are copied to the clipboard ready to be pasted on your social media platform of choice

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Extracurricular

Mentor @ Code for India hackathon IITD - We shared memes, giggles, laughs & great ideas- this event was tech-focused, data science-focused, AI-focused, ML-focused. The developers, certifications or masters, specialists in computer vision, different AI models, packages, frameworks were astounding: sponsored the event and it was a natural choice – where our mission statement is: "... *see development differently, discover insights and unlock endless possibilities* ..."

Graphics Designer and IT member at Daan-Utsav - Daan Utsav is a week-long festival from 2nd October to 8th October aimed at celebrating 'The Joy Of Giving'. Got to learn with great insight about teamwork & research. The event commenced with a fun-filled, energizing networking activity which ensured that conversations take the first priority

India CSR summit'18 - *MASHKOT and Team member*
Talking changing shades from Corporate to Development Sector, India CSR Summit by NGO Box, the biggest CSR event in India. Spanning across a two-day event, The Indian CSR Summit gave a huge platform to meet and learn from the top CSR leaders and the difference they are making through their projects in this space.

Vichar Manthan'18,19 - *Graphic Designer*
Created design elements for and edited PowerPoint presentation given by the President of the debating club at Rajdhani College, DU. Designed visual content & Posters for Facebook and Instagram posts, which in total received over 1,400 points of engagement.