Suryansh Patel

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**SUMMARY**

Enthusiastic computer science professional with strong software development skills and a growing expertise in machine learning. Currently advancing studies in the US, eager to apply technical knowledge to impactful projects in information technology.

**TECHNICAL SKILLS**

* **Programming Languages:** Java, Python, JavaScript
* **Frameworks:** Spring Boot, Django, React JS(Redux)
* **Computer Vision:** PyTorch, OpenCV
* **Machine Learning:** TensorFlow, scikit-learn
* **Natural Language Processing:** spaCy
* **Data Visualization:** Matplotlib, Seaborn

**WORK EXPERIENCE**

**Research Assistant June 2024 - Present**

**University of Missouri Kansas City Missouri,USA**

Working as research assistant in data science and computer vision projects:

* **Weapon Detection**: Developing a novel model based on YOLOv9 for the detection and classification of various types of guns (e.g., handgun, machine gun). The project also aims to generate probability assessments to determine if a detected gun is real or fake.
* **Safegraph Project**: Analyzing Safegraph mobility data to provide practical insights. Collaborating with the University of Tokyo on this project.

Reviewing research papers to be published in the fields of computer vision and natural language processing.

**Digital Specialist Engineer June 2022 - December 2024**

**Infosys Limited. Indore,MP**

Java Back-end Developer for Toyota Project:

* Recreated a Document Creation API in spring boot to fetch encoded data from another API, decode it, and transfer it to another tool, significantly increasing the application's speed.
* Enhanced existing application capabilities to support upcoming challenges.
* Created report generation tool in jasper for proposal and order fulfillment documents.

Internal Data Science Project:

* Analyzed ongoing projects to predict profits for the next quarter and identify the most profitable sectors.
* Developed strategies based on ID swipe in/out data to improve employee productivity.

Ranked in the top 4% of learners within the company, achieving a DQ Score of 65 compared to the company

average of 25.

**Digital Nurture Program Intern Feb, 2021 - May 2021**

**Cognizant. Bhopal,MP**

Database Engineering for Kubota Project:

* Worked with MySQL databases, learning how to use and create new databases for project development.
* Enhanced code speed by optimizing with data structure and algorithm (DSA) techniques.

Software Engineering and Development:

* worked with senior architects to gain insights into software lifecycle methodologies and practices.
* Utilized Bootstrap to construct web pages.
* Applied data structure concepts such as sorting and searching to enhance problem-solving abilities.

**DATA SCIENCE PROJECTS**

**Pose Detection of Experienced vs Amature May 2024 - July-2024**

University of Missouri-Kansas City Missouri US

* Developed a project to detect differences in exercise techniques between professional athletes and amateurs, providing real-time feedback for improvement.
* Utilized YOLOv5 and OpenCV for person detection and MediaPipe for joint detection in the body, comparing these with professional standards.
* Planned integration with CNN models and EMG signals data to enhance accuracy and F1 score in future iterations.

**Dry Bean Data Classification Jan 2024 - May-2024**

**University of Missouri-Kansas City Missouri US**

* Developed machine learning models and neural networks to classify dry bean data into seven classes.
* Conducted data preprocessing from scratch, utilizing custom techniques without external libraries.
* Implemented TensorFlow and scikit-learn for model development, alongside matplotlib for data visualization and clustering algorithms for insights.

# Questions forming model Aug 2019 - Oct 2019

**Lakshmi Narain College of Technology Bhopal,MP**

* Developed a model to generate short and long questions based on input text paragraphs.
* Implemented using TensorFlow Hub for transfer learning, augmenting with three hidden layers to achieve desired outcomes.
* Presented the project at the Smart India Hackathon, securing funding for further development.

**Walmart Data Analysis Jan 2024 - May-2024**

**University of Missouri-Kansas City Missouri US**

* A personal project focusing on analyzing walmart data to get useful conclusions
* Walmart dataset is one of the trending dataset in kaggle
* Used TensorFlow, Sklearn for model building and matplotlib for visualizations.

**IT PROJECTS**

[**Evaluation of Academic Performance**](https://github.com/suryansh-max/Academic_End) **Apr 2019 - Aug 2019**

**Lakshmi Narain College of Technology Bhopal,MP**

* Developed an application for efficient uploading and sharing of academic reports and grades between teachers and students.
* Utilized ReactJS for the frontend and followed Spring Boot MVC architecture for the backend implementation.

[**Evaluation of Academic Performance**](https://github.com/suryansh-max/Academic_End) **Apr 2019 - Aug 2019**

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[**Vertex K Labeling of Amulgated Star Graph**](https://github.com/suryansh-max/Vertex-K-Labeling-for-Amulgated-Star-Graph) **Jan 2024 - May 2024**

**University of Missouri-Kansas City Missouri US**

* Applied dynamic programming in Python to label vertices in a complex graph using vertex K labeling techniques, achieving specific mathematical constraints.

[**Suvidha - Crowd Management Application**](https://github.com/real4suraj2/Scheduler)  **Jan, 2020 - Mar,2020**

**Lakshmi Narain College of Technology Bhopal,MP**

* Developed a crowd management application to enforce social distancing in public stores during the COVID-19 pandemic.
* Implemented in JavaScript with MySQL database integration, allowing customers to select visitation slots that automatically indicate store capacity.

**RESEARCH**

[*Leveraging the use of blockchain technology for electronic health care record*](https://www.doi.org/10.56726/IRJMETS36402)  **Apr,2023**

IRJMETS  **Impact Factor - 7.868**

* Use of blockchain to create a decentralized network to take data from various hospitals and store it for future.
* Lead and created a full fledged application with a group of 5 received third place in all LNCT colleges for the best project of that academic year([Application Link](https://github.com/suryansh-max/BlockChain-based-Electronic-Health-Record-System)).

# RECENT FEEDS

* Currently providing guidance and support to one of my friends in creating a special CNN project at University of Glasgow UK. and proposed to file a research paper for data augmentation for CNN.
* I will publish a new research paper on vertex K Labeling the work is almost finished.

**EDUCATION**

**Masters in Computer Science January 2024 - Present**

University of Missouri Kansas City MO,USA

Computer Science GPA 4/4

**Bachelor of Technology in Computer Science and Engineering April 2022**

Lakshmi Narain College of Technology MP,India

Computer Science GPA 8.85/10

**CERTIFICATIONS/ACHIEVEMENTS**

[Infosys certified Java developer](https://drive.google.com/file/d/1pkN1KZtutt3YJUku_4GUbqZmeANK5vUX/view?usp=sharing) [Infosys certified Spring boot professional](https://drive.google.com/file/d/1cKPJpNagTFqBySv-nmtwfjB6J3SlySZl/view?usp=sharing) 3rd prize for best project of 2022

**SOCIAL WORK AND CO-CURRICULAR**

* Working with the internationally known Robin Hood Army to serve food & other useful supplies to poor families.
* Inspirational quotes creator, swimmer and regular gym attendee.