

# Shyamal Mishra

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<https://shyamal11.github.io/portfolio/>

## EDUCATION

**Master of Science - Computer Science** | Drexel University | GPA: 3.7/4.0

**Aug 2022 – Jun 2024**

**Bachelor of Technology - Information Technology** | KIIT, Bhubaneswar

**Jul 2015 – Mar 2019**

## SKILLS

**Languages:** Java, Python, C++, SQL, JavaScript, HTML5, CSS

**Databases & Frameworks:** NoSQL, MySQL, PostgreSQL, MongoDB, React, Node.js, Flask, TensorFlow

**Libraries & Tools:** Kafka, Git, Docker, NLTK, OpenCV, scikit-learn, Pandas, NumPy, selenium, SciPy

**Others:** Linux, git, GCP, REST API, Jenkins, Postman, PyTorch, Kubernetes, JIRA, AWS, PySpark, SOAP, Gen AI

**soft skills:** Clear emphatic communicator, efficient time manager, collaborative team player

## EXPERIENCE

**Research Assistant | SOAR Lab, Drexel University, PA, USA**

**Jun 2023 – Dec 2023**

- Developed a bot utilizing Large Language Models (LLMs) to identify toxic conversations in GitHub discussions and suggest non-toxic alternatives, achieving an 89% accuracy rate.
- **Paper published as:** "Exploring ChatGPT for Toxicity Detection in GitHub" in the 46th International Conference on Software Engineering (ICSE, Apr 2024) [https://soar-lab.github.io/papers/exploring\\_toxicity.pdf](https://soar-lab.github.io/papers/exploring_toxicity.pdf)

**Software Engineer | Deloitte , Hyderabad**

**Apr 2019 – Aug 2022**

- Led the design and implementation of a middleware solution to synchronize customer data across five distinct systems, leveraging event-driven architecture and asynchronous processing to handle real-time data updates.
- Developed chunked file transfer mechanism to resolve large file transfer challenges, reducing system timeouts by 25%.
- Implemented Apache Spark to replace legacy cron jobs, enabling parallelized data processing and scaling the data ingestion pipeline to handle 4 times the previous data volume.
- Enhanced CI/CD pipelines by implementing Jenkins best practices, leading to faster and more reliable product releases.
- Played a key role in the Medicaid module implementation for Rhode Island's UHIP project, significantly reducing processing time for Medicaid applications utilized by half a million users.

**Application Developer | Tata Technologies, Jamshedpur**

**Mar 2017 – May 2017**

- Contributed to creating a cafeteria ordering app, leading to an average decrease of 4 minutes in food delivery time.
- Revamped the menu navigation structure to categorize items more effectively and improve discoverability.

## ACADEMIC PROJECTS

**Dynamic Media Processing | AWS (EC2, S3, Lambda, DynamoDB), Docker, Flask**

**Apr 2024**

- Established a multi-tier serverless infrastructure with instant auto-scaling, adeptly managing 1,000+ requests/second.
- Executed video frame extraction and image recognition via a Lambda function triggered by S3 integration.

**Full Stack Mental Health Support Platform | React.js, Node.js, MongoDB, OpenAI**

**Nov 2023**

- Innovated AI-driven algorithms for initial mental health evaluations and offering virtual yoga guidance.
- Implemented the Peer Support Network, fostering connections among users to provide mutual encouragement.

**Wildlife conservation using Image Identification System | OpenCV, PyTorch**

**Jul 2023**

- Designed animal species detection and classification models utilizing PyTorch and transfer learning techniques.
- Faster R-CNN outperformed SSD with an overall accuracy of 91% and higher mean average precision scores.

**Cryptocurrency Price Forecasting | TensorFlow, Numpy, Pandas, Matplotlib**

**Jan 2023**

- Collaborated with a team to develop neural networks for predicting cryptocurrency prices through an ablation study.
- Experimented with varied LSTM layer numbers and 1D-CNN alongside LSTM layers, adjusting hyperparameters.

## ACHIEVEMENTS

• **Best Project Award:** For the project presented on UI design | Drexel University

**Mar 2024**

• **Community Outreach Coordinator** at Sashakti Foundation

**Jan 2021 - Present**

• **Promotions:** Recognized through early promotions for completing top-priority initiatives at Deloitte

**May 2022**