Uzzal Podder

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https://github.com/uzl/

Summary

- 4 years of total experience in software engineering, with 3 years in machine learning and computer vision.
- Adapted objectives and key results based leadership qualities with growth mindset and emotional intelligence.
- Experienced in supervised and self-supervised learning tasks including image recognition, object detection, semantic segmentation, pose estimation, anomaly detection, regression, clustering.
- Proficient at Pytorch, Tensorflow(Keras), OpenCV, Python and deep learning workflow management.

Experience

Computer Vision Engineer

CHOWA GIKEN Corporation

Dec 2018 - Present (3 years +)

I develop scalable machine learning and computer vision algorithms, leveraging deep learning and classical geometric algorithms. My job responsibilities include initial research on state-of-the-art algorithms for problem framing, prototype design for PoC, ML model testing with detailed statistical analysis and deployment in production environment. In a team of six members, I collaborate as a development leader. My major contributions include-

• Developed an anomaly detection model for detecting foreign contamination in food by designing a multimodal self supervised transformers based architecture.

• Developed an Image-to-Image translation ML model for transforming metallic surface scribed text into OCR readable grayscale text.

• Designed a semantic segmentation model for the electric pole's serial-plate with accuracy 98%(target was 95%) by using hybrid model architecture.

• Improved medical image classification accuracy by 9% by reimplementing deep learning model with several custom loss functions.

• Created a recyclable object recognition model with accuracy 96%(target was 90%) by combining CNN and RNN multistage pipeline.

Experienced in -

• Python, C++, CUDA, OOP

• NumPy, Pandas, SciPy, Scikit-learn, Matplotlib, OpenCV, PyTorch, Tensorflow, Tensorboard

• ResNet, EfficientNet, MobileNet, U-Net, Mask R-CNN, SSD, YOLO, GNN, GAN, Transformers, ViT

• Docker, MLflow, GCP, AWS, Azure IoT hub, Ubuntu, bash scripting

• Industrial camera module, sensors, Nvidia jetson, Raspberry pi, Arduino

Research Assistant

Hokkaido University

Dec 2020 - Mar 2021 (4 months)

My role was to read and implement academic literature on computer vision and human-computer Interaction which are recently published in CVPR, NIPS, ICML, ICCV, ACL to accelerate an ongoing research project in Jiritsu Lab.

Software Engineer
Divine IT Limited
Nov 2017 - Sep 2018 (11 months)
I worked as a backend software developer. My primary responsibilities were backend REST API design, code optimization, database query optimization, source control and testing.

My notable contributions were-
• Increased server response efficiency by 12% by caching reusable dynamically generated java class objects. Technology used: Java, Ehcache, Redis cache, Linux/unix
• Improved request processing capability of a SaS marketplace by converting from monolithic to microservice architecture. Technology used: Java Spring Boot, PostgreSQL, Javascript, Multi-tenant architecture.

Education

Bangabandhu Sheikh Mujibur Rahman Science and Technology University (BSMRSTU), Gopalganj
Bachelor of Science - BS, Computer Science and Engineering
2013 - 2017
Key Courses Taken: Data Structures, Design and Analysis of Algorithms, Database Management System, Computer Networks, Computer Graphics, Operating Systems, Software Engineering, Artificial Intelligence, Machine Learning, Linear Algebra, Calculus, Matrices and Differential Equations, Statistics, Numerical Methods, Discrete Mathematics.

Licenses & Certifications

Deep Learning Specialization - Coursera
NDHHTCWGRHE4

Skills

Machine Learning • Deep Learning • Digital Image Processing • Video Processing • Natural Language Processing (NLP) • Distributed Systems • Algorithm Analysis • Debugging • Version Control • Software Development

Honors & Awards

Best Young Innovator in National Innovation Fair - a2i Programme
Feb 2016

1st Runner up in LICT Code Fest - Top Up IT and ITES Foundation Project, LICT Project, ICT Division, Government of Bangladesh
Feb 2017