PARTHVI MEHTA

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EDUCATION

Johns Hopkins University | Master of Science in Computer Science   Dec 2024
- Coursework: Databases, Artificial Intelligence, Natural Language Processing, Parallel Computing in Data Science
- Research: VectorCam: Mosquito Surveillance @ Center for Bioengineering Innovation and Design, backed by Gates Foundation

University Of Mumbai | Bachelor of Technology in Computer Engineering   Oct 2020
- Coursework: Object Oriented Programming, Digital Signal and Image Processing, Machine Learning, Neural Networks

SKILLS

- **Languages**: Python, Java, SQL, Javascript, C, C++, PHP, HTML, CSS
- **Libraries & Frameworks**: PyTorch, Tensorflow (Basic), Selenium, OpenCV, Pandas, Numpy, Scikit-learn, NLTK
- **Software Tools:** SAP, Informatica, AWS, Salesforce Workbench, Android Studio, Automation Anywhere RPA

PROFESSIONAL EXPERIENCE

Graduate Research Assistant | Johns Hopkins University [Poster]   Feb 2023 – Present
- Developed 'VectorCam', a low-cost mosquito surveillance system for real-time mosquito species multiclass identification
- Led the curation and utilization of a diverse 6,000-photo mosquito dataset, employing computer vision techniques with EfficientNet and Swin Transformer for model development
- *Accuracy*: Achieved 95% model accuracy, reducing report generation time by 90% in Uganda with seamless DHIS2 integration

Computer Vision Intern | Faclon Labs   Oct 2022 – Dec 2022
- Enabled efficient equipment monitoring and entry-exit analysis with advanced Person-Machine Interaction detection
- Engineered YOLOv5-based object detection model, precisely counting individuals near the machine using bounding box area
- *Efficiency*: Innovated a dynamic web app framework, elevating real-time monitoring efficiency by 90%

Software Quality Assurance Analyst | Wolters Kluwer   Oct 2020 – Sep 2022
- Streamlined Black Box testing for Informatica workflows by creating and executing manual test cases
- Created functional testing framework of business case analysis in customer relationship management data lakes
- *Accuracy*: Implemented root cause analysis process targeting transformation errors, improving error prevention by 95%

Automation Intern | IDeaS Revenue Solutions – a SAS company   May 2019 – Jul 2019
- Formed automation scripts on Salesforce, MS Flow, and Power BI using Selenium for revenue reports
- Built a software bot to extract and process files using Automation Anywhere Robotic Process Automation tool
- *Efficiency*: Created Automation programs in Python that decreased manual efforts by 90% and manual errors by 75%

Software Development Intern | University of Mumbai   Jan 2019 – Apr 2019
- Built a context-based chatbot for university website to assist over 100,000 prospective students with admission-related
- Implemented machine learning techniques by training the bot on both Google BERT ML model and Long Short-Term Memory (LSTM) Recurrent Neural Network for precise query responses
- *Efficiency*: Boosted efficiency and user satisfaction by reducing admission query emails by 70%

PUBLICATIONS AND PROJECTS

SageRef: Single Image Reflection Removal [Project Repository]   Apr 2023
- Developed a technique using a variational autoencoder to separate reflections and backgrounds in digitally captured images
- *Quality*: Evaluated on the SIR2 benchmark dataset with 600 images, achieving a 79% of structural similarity index (SSIM)

Monitor Social Distance using CNN & Image Transformation [Publication in IEEE Conference, 2021]   Sep 2020 – Dec 2020
- Developed a Neural Network model designed to monitor and detect social distancing violations in real-time environments, addressing the critical need for safety measures during the global pandemic
- Implemented Faster Region Convolutional Neural Network & YOLOv5 models integrated with OpenCV on the COCO dataset
- *Accuracy*: Achieved consistent frame-by-frame object detection with an overall accuracy exceeding 95%

Lawgical: Automated Legal Counselling Application   Jun 2019 – May 2020
- *Efficiency*: Leveraged machine learning for case success prediction → aiding clients in reducing legal fees by 30% and expediting decision-making by 35%
- *Accuracy*: Assembled a training corpus via web scraping and applied NLP techniques like lemmatizing using tools such as LexNLP and spaCy, resulting in a model with 82% accuracy for personalized case recommendations

Automated Digital Prescription from Voice   Jan 2020
- Implemented a user-friendly mobile app converting voice to text for prescriptions, modernizing medical data across India
- Leveraged Lexigram API for keyword-based text extraction, reducing potential medical misinterpretations
- *Accuracy*: Attained 90% transcription accuracy, addressing issues of illegibility in documentation