Bipul Simkhada

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CAREER SUMMARY

A knowledgeable, self-driven, and motivated individual with over 3 years of experience in product development and design, utilizing strong technical skills in hardware and software. Demonstrated ability to contribute to teams with a proven project management and problem-solving track record. Experienced in collaborating with cross-functional teams to bring products from concept to launch. Currently looking for opportunities in the field of Artificial intelligence, or Machine Learning.

EDUCATION

MS in Computer Engineering | Florida International University | January 2023 – August 2024

- Cumulative GPA: **4.0**
- Concentration: **Machine Learning**

BS in Computer Engineering | Arkansas Tech University | January 2016 – December 2019

- Cumulative GPA: **4.0**
- Arkansas **EIT #9200** FE electrical and computer

EXPERIENCE

Graduate Research Assistant | Florida International University | August 2023 – Present

- Develop and implement image masking and segmentation techniques using edge detection, edge marking, hole filling, and continuity techniques to focus on cortical area (gray matter) in MRI T1 images.
- Analyze MRI T1 images using deep learning techniques and identify potential patterns and markers associated with Alzheimer's disease.
- Collaborated with interdisciplinary teams of researchers, experts, and senior members to share findings, discuss research strategies, and foster a collaborative research environment.

Software Project Manager Intern | Motorola Solutions | May 2023 – Present

- Gather requirements from stakeholders to define the scope and requirement during feature development and assisted in planning and executing software releases for a 2-way radio system, ensuring adherence to project timelines and objectives.
- Assist in identifying and mitigating risks associated with the software release process to ensure smooth and timely delivery.
- Contribute to the coordination of Alpha and Beta testing phases, facilitating early product testing and feedback collection.
- Contribute to process improvement initiatives, actively seeking opportunities to enhance efficiency and effectiveness in the current software release method.

Product Engineer | ABB Inc. | February 2020 – December 2022

- Product Engineer for ABB Zenith Automatic Transfer Switch (ATS). Contributed to the Transfer of Work (ToW) and New Product Introduction (NPI) increasing revenue to grow over 22+M.
- Initiated engineering change requests to R&D when necessary and interacted with cross-functional teams to reach a consensus on the technical changes required to improve the design, conveying these to suppliers and leading them to its completion averaging 20 per month.
- Developed and led test programs and factory acceptance tests to validate designs of ATS and controller. Conducted studies and design experiments to support the development of new Zenith T-series products.
- Led Concept Design Reviews, Detailed Design Reviews, Design Verification Reviews, and Manufacturing feasibility with cross-functional teams. Transferred new products from the R&D development team to Operation with all the set of documentation.

Engineering Intern | ABB Motors and Mechanical Inc. | October 2019 – January 2020
- Constructed a Wi-Fi-based alarm system using a WISE-4000 remote wireless I/O module programmed in Python along with Raspberry Pi to notify operators when incoming material was delivered to their stations.
- Code and troubleshoot MiR industrial robot as needed in production by reducing non-value-added activities.
- Fetched restful API from the Internet of Things device using Python JSON to analyze input data and assist in continuous improvement initiatives.

Electrical Engineering Intern | Entergy- Arkansas Nuclear One |October 2018 – Jan 2019
- Developed and tested new electrical designs essential for the simulator room for the nuclear plant.
- Data collection and analysis used in the development of electrical design specifications. Documentation of electrical design modification

UNIVERSITY WORK EXPERIENCE
- Web Developer at FIU – Department of Civil Engineering (1 semester).
- 3D Printing Technician at FIU – Department of Architecture
- Resident Assistant at Arkansas Tech University Housing (7 semesters).
- Undergrad Research on Water quality monitoring Project (2 semesters).
- Soft robotic hand as a senior design project at Arkansas Tech University
- Lab Assistant for Chemistry I at Arkansas Tech University (3 semesters).
- Lab Assistant at ATU - Department of Electrical Engineering (1 semester).

MACHINE LEARNING PROJECTS
- CiFAR_10 classification using Convolutional Neural network.
- Transfer Learning with the MNIST dataset
- Stock Prediction using LSTM Recurrent Neutral Network
- Image Compression using Auto Encoder.
- Sentiment Analysis with BERT
- Image Segmentation using UNet Architecture
- Image Generation on MNIST using Generative Adversarial Network (GAN)
- Affine Transformation and perspective transformation on 3D objects.
- Edge Detection using Kirsch, Prewitt Compass, and Laplacian matrices.
- Principal Component Analysis on Multispectral Images
- Explainable AI for text classification using LIM

ENGINEERING SKILLS
- Machine Learning: Scikit-learn, Keras, TensorFlow, OpenCV
- Programming: C++, Python, PHP, JavaScript, MySQL, MongoDB
- Design tools: AutoCAD, Creo, Autodesk Eagle, Autodesk Inventor.
- Engineering: Pspice, Lab View, PLC, MATLAB
- PLM: SAP, Windchill

CORE COURSES
- Deep Learning
- Neural Network
- Digital Image Processing
- Fuzzy System Design
- Programming I and II
- Data Structure
- Operating System
- Electronics I and II
- Digital Signal Processing
- Signal and System
- Engineering Modeling Design
- Computer Vision
- Communication I
- Discrete Structure
- Math Method for Engineers
- Computer Architecture and Organization