




AMRIT KUMAR VERMA

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Professional Summary

Research professional with almost 4 years of experience in the design and development of enterprise web applications and their microservice architectures, falsification-based verification & validation of autonomous vehicles using reinforcement learning, Deep Learning, EV charging prototype using OCPP 1.6, and DevOps.



Education

Master of Technology – M. Tech (CSE, 2017 – '19)

National Institute of Technology, Silchar (India)

CPI – 9.19/10 (Equiv. to 91.9%)

Bachelor of Technology – B. Tech (CSE, 2012 – '16)

DGPA – 8.15/10



Achievements

- Runner up in SIEMENS Innovathon in Business Viability category - 2019
- Secured highest rank in M. Tech CSE
- Cleared GATE – 2017 (CSE)



Skills

- Python
- Java
- C#
- Next-JS
- Digital Twin
- Docker
- git-hub/lab
- Deep Learning
- Unity
- AWS
- DevOps



Work Experience (SIEMENS Research, 2019 – Present)

- Simulation-based testing of autonomous vehicles using Webots Simulator
- Falsification-based testing of autonomous vehicles using RL and Carla Simulator
- Involved in building the backend for PoC of EV charging solution
- Contributed to the MVP (backend) development for end-to-end NEA-EV charging project for Nepal
- Worked on Comfy project having responsibilities of writing backend code, and test code (backend & UI)
- Hands on experience in DevOps, built a PoC for Environment as a Service (EaaS)
- Developed a KG-based solution to bridge the gap between COMOS & SIMIT in Digitalization topic
- Contributed to the backend migration from monolith to microservice for internal software-foundation
- Built an NLP-based semi-automatic mapping b/w product attributes of different vendors for APS
- Involved in writing C# code to build a semi-automatic mapping between COMOS & SIMIT
- Currently, a part of the open-source software SW360 with the assignments of UI migration using Next-JS



Past Projects

- Information Security using Digital Image Processing
- A medical expert system to identify major factors of disease using ML & DL techniques



Major Thesis Project

- Design of transparent medical expert system using ML & DL techniques



Industrial Training

- Diesel Locomotive Works (DLW) – Varanasi, India (Government of India)



Publications (Journals)

- Verma, A.K., Chakraborty, M. & Biswas, S.K. Breast Cancer Management System Using Decision Tree and Neural Network. SN COMPUT. SCI. 2, 234(2021). <https://doi.org/10.1007/s42979-021-00644-2> (Scopus)
- Verma, A.K., Biswas, S.K., Chakraborty, M. et al. A transparent machine learning algorithm to manage diabetes: TDMSML. Adv. in Comp. Int. 3, 5 (2023). <https://doi.org/10.1007/s43674-022-00051-x>



Hobby

- Photography