Gursharen Kaur Suri

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https://github.com/GursharenKaur

Summary

Computer Engineering student skilled in Full Stack Development. Experienced in building scalable applications using modern frameworks and driven by a passion for secure, user-focused digital innovation. Hands-on expertise in Machine Learning. Familiar with Git, Agile (Scrum), and collaborative team environments. Eager to contribute to digital transformation and innovation through cutting-edge technology.

Technical Skills

- **Framework & Tools:** React, Node.js, Express.js, OpenCV, Selenium, Oracle SQL
- **Machine Learning & Deep Learning:** Shifted Window(SWIN) Transformer, Semantic Segmentation
- **Coursework:** Software Engineering (Agile Development, Scrum), AI, Computer Networks, DSA
- **Others:** Git, Github, Excel, Data Analysis, Data Structures, User Research, Technical Writing, Problem-solving

Projects

AI-based Skin Disease Detection System ML, Swin Transformer

- Designing and fine-tuning a Swin Transformer deep learning model for accurate classification of skin diseases
- Implementing efficient image preprocessing pipelines including resizing, normalization, and tensor conversion to optimize model inference performance
- Working on software diagrams for proper end-to-end implementation

Road Segmentation from Satellite Images ML, DL, CNNs

- Implemented and compared multiple architectures including U-Net Lite, U-Net Full, U-Net++, DeepLabV3+ (ResNet-50), HRNet-Small, and SegFormer-B0
- Built a custom data preprocessing pipeline including resizing, normalization, binary mask generation, and data augmentation using Albumentations
- Optimized training for limited GPU memory using mixed-precision training and efficient batch sizing

Work Experience

Research Intern, Thapar Institute of Engineering and Technology June'25 - Ongoing

- Working Under Dr. Neeraj Kumar and Dr. Sandeep Verma, Computer Science Department, TIET
- Conducting comprehensive review on underwater sensor networks, analyzing advancements in communication protocols and 3D network topologies
- Enhancing skills in scientific writing, critical analysis, and data interpretation, collaborating with domain experts throughout the research process

Education

B.E. Computer Engineering - Thapar Institute of Engineering and Technology 2023-2027
CGPA: 8.57/10

XII - Swami Sant Dass Public School, Phagwara 2023
CBSE 94.2%

Organizational Roles

Technical Secretary - Thapar Venture Club, 2025-26
Overall Content Coordinator - E-Summit'25, Thapar Venture Club
Executive Committee Member - Thapar Food Festival, 2025