Suvanga Dhakal

In/Suvanga | 419-699-0931 | suvanga.github.io | suvangadhakal0@gmail.com | Suvanga

Skills

- **AI & ML:** Python | PyTorch | TensorFlow | CNNs | Transformers | Model Evaluation | OpenAI API | Hugging Face | LLMs | RAG
- **Data & Backend:** SQL | MongoDB | Node.js | Express | Vector Databases | Data Analysis | Pandas | NumPy
- **Core Development:** TypeScript | JavaScript | C++ | Docker | Linux | C#.NET | Git | AWS | Azure | CI/CD

Experience

Software Engineer Intern **Whirlpool** *Marion, OH, USA* **05/2024 - 09/2024**

- Intelligent Automation:Engineered an automated pipeline for manufacturing time-series data, enabling downstream analytics and ML-ready feature extraction, improving data accuracy by 65%
- Data Analytics**:** Developed a historical data dashboard to track idle times, enabling leadership to visualize labor losses and make data-driven decisions to optimize production lines
- Algorithm Optimization: Refactored legacy parsing scripts to implement dynamic job identifiers, significantly reducing runtime errors and enhancing system resilience by 3x against data variability

Software Engineer Intern **Whirlpool** *Marion, OH, USA* **12/2022 - 05/2023**

- Performance Engineering**:** Optimized a critical web application through algorithmic refinement, achieving a 23x reduction in file size and a 9x boost in load performance
- Operational Intelligence: Developed an internal "Fixture Finder" search tool using DOM manipulation that reduced part retrieval time 30% directly improving assembly line efficiency
- Cost Reduction: Conducted production data analysis to optimize fixture weights, resulting in over $35,000 in immediate cost savings and a 67% cost avoidance

IT Technician **University of Toledo** *Toledo, OH, USA* **01/2022 - Current**

- System Support**:** Manage critical IT tickets for the hospital's Epic EMR system, ensuring high availability and 99.9% uptime for medical staff and daily operations
- Infrastructure Management: Maintain hardware and software infrastructure for over 500 users, resolving technical support issues with a 95% success rate and minimizing system downtime

Education

Bachelor of Science **University of Toledo** *Toledo, OH, USA* **08/2021 - 05/2026**

- Major in Computer Engineering
- Relevant Coursework: Machine Learning, Artificial Intelligence, Data Structures, Algorithms, Computer Architecture

Projects

DEEPCLS | Multimodal Cancer Detection AI | *Python, PyTorch, LLMs*

- Multimodal Architecture: Engineered a hybrid AI pipeline integrating Computer Vision for video classification and LLMs to gener interpretable diagnostic reasoning for clinicians
- Accuracy Optimization**:** Implemented a multimodal pipeline combining CNN-based video classification with LLM-based clinical reasoning; improved diagnostic consistency and reduced hallucinations via RAG grounded in peer-reviewed literature
- Model Training & Evaluation: Trained CNN-based video models on annotated cancer cell datasets, achieving improved classification accuracy and clinically interpretable outputs

MOMENTUM | AI-Powered Habit Intelligence | *React, Vite, OpenAI API*

- Predictive Modeling: Developed an "AI Growth Coach" that leverages OpenAI API to analyze user consistency trends and generate personalized, data-driven motivational insights
- Frontend Engineering: Built a responsive, high-performance UI using React and Vite, translating complex behavioral data into interactive visualization charts for user tracking

MONEYMATE | FinTech Data Pipeline | *Node.js, MongoDB, Auth0*

- Backend Architecture: Architected a scalable Node.js backend with complex MongoDB schemas to manage relational financial data between users, debts, and expense logs
- Automated Processing: Integrated OpenAI API for OCR-based receipt parsing, converting unstructured image data into structured financial records with high precision.

SILBELLS | IoT Assistive Safety System | *IoT, C++, Cloud Integration*

- Real-Time Inference: Engineered an IoT safety system integrating hardware sensors with a cloud backend to deliver sub-second vibration and light alerts for accessibility.

Achievements

- **President:** Nepali Student Organization (200+ members) directed initiatives and managed operations **(08/2023 - 08/2024)**
- **Vice-President:** Cybersecurity Club Led programming workshops and team lead for Cyber-Force Competition (Chicago)
- **EBEID Academic Scholarship($4,000):** Recognized for academic excellence and leadership potential
- **International Rocket Scholarship($8,500):** Recognized for exceptional managerial abilities and excellence in school