

SIDDHARTH SHARMA

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TECHNICAL SKILLS

Languages: Python, C++, C, Swift, JavaScript, Node.js, Next.js, React, SQL, MySQL, HTML, CSS, Tailwind CSS
AI/ML: TensorFlow, Keras, OpenCV, Scikit-Learn, PyTorch, NumPy, Pandas, CUDA, NLTK, Hugging Face, LLM, Transformer Models, Reinforcement Learning, Generative Models, Image Segmentation, Computer Vision, NLP
Tools/Skills: AWS, Docker, kubernetes, REST API, Git, GitHub, Blockchain, Cryptography, Mathematical Modeling, Research, Computer Graphics

WORK EXPERIENCE

TekMonks

Software Developer / AI Engineer

Remote, USA

Jan 2025 – Present

- Optimized AI model prompts and refined prompt strategies to optimize LLM performance by inducing desired behaviour, improving contextual accuracy and output relevance.
- Benchmarked 10+ LLMs to evaluate accuracy and latency, identifying the optimal model for enterprise deployment.

Tiny Archives

Software Developer / DevOps Engineer

Remote, USA

Dec 2024 – Present

- Deployed the company's full-stack web app on AWS, improving uptime and deployment efficiency.
- Secured user data by implementing hybrid encryption with custom cipher protocols for file uploads.
- Refactored critical components of the codebase, cutting system lag and latency by 50% and improving user experience.
- Onboarded and mentored interns on system architecture, DevOps tools, and Git version control best practices.

TE Connectivity

AI Research and Development – Visiting Engineer

Pennsylvania, USA

Oct 2022 – May 2023

- Developed a neural network to detect data matrices in monochrome images, achieving 93% precision.
- Built and labeled a custom dataset of 50,000+ images to improve model generalization in industrial settings.
- Reduced production time by up to 6 months and saved \$100K by adding efficiency enhancements to production lines.
- Engineered an AI-driven ROI detection system for low-contrast images, reducing image processing latency by 85%.

Deep LogicTech

AI Research Co-op

Delhi, India

Mar 2021 – Jun 2022

- Built a machine learning solution using Isolation Forest to detect anomalies in SSH server and database traffic to prevent cyber attacks with 90% accuracy.
- Integrated NLP-based query parsing into internal database systems, reducing data retrieval time by 40% and optimizing data accessibility.

EDUCATION

The Pennsylvania State University

M.S. in Computer Science

Aug 2022 - Aug 2024

GPA: 3.4/4.0

- Teaching and Research Assistant - Assisted faculty in Data Structures and Algorithms, mentoring 50+ students.
- Courses - Thesis Research, Computation Theory, Adv Algorithms, Adv Database, Adv Operating Systems, Neural Networks, NLP

Guru Gobind Singh Indraprastha University

B.tech in Computer Science

Aug 2018 - May 2022

GPA: 8.3/10.0

- Led programming classes for freshman and sophomore students as part of a university sponsored initiative.
- Courses - Adv Mathematics, Software Engineering, Data Structures, Algorithms, AI, ML, Computer Architecture, Object Oriented Programming, Java, Theory of Computation, Adv DBMS, Software Testing and Quality Assurance

PUBLICATIONS AND PROJECTS

Object and Human Tracking in 3D Space via Monocular Vision

Master's Thesis – Penn State

May 2023 – Aug 2024

etda.libraries.psu.edu/catalog/29519szs7214

- Developed novel algorithms grounded in mathematical principles to interpret 2D images for real-time 3D tracking.
- Created a monocular vision framework to estimate 3D position and motion using 2D camera inputs.
- Devised depth estimation formulas using vanishing points and perspective projection for real-time tracking.

Blockchain-Based Digital Forensics Framework using IoT

Research Paper – GGSIPU

Aug 2021 – May 2022

doi.org/10.47974/JDMSC-1733

- Designed a lightweight private blockchain using SHA256 and custom ciphering for forensic data management.
- Engineered a decentralized network protocol using sockets and VPNs to connect 10+ international nodes.
- Secured file-level forensic evidence with custom encryption and ensured tamper-proof storage via block hashes.
- Ensured cross-platform blockchain consistency through asynchronous database syncing and real-time messaging.