Nripesh Niketan

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EDUCATION

University of Sheffield   Sheffield, United Kingdom
M.Sc. Cybersecurity and Artificial Intelligence   *Sep 2024 – Sep 2025*

Heriot-Watt University   Dubai, UAE
B.Sc. Computer Science   *Sep 2021 – Apr 2023*
Honors Degree in Artificial Intelligence   *Sep 2023 – Apr 2024*

SKILLS

Languages: Python ,C/C++, SQL
Technologies: Git, Docker, AWS, GCP, Azure, PyTorch, TensorFlow, Numpy, MySQL, MongoDB
Methodologies: Agile, Scrum, OOP, Functional Programming, DevOps, CI/CD

EXPERIENCE

CrossGL   Delaware, USA (Remote)
CEO & Founder   *May 2024 – Present*

- Founded *CrossGL*, a startup focused on creating cross-platform solutions for graphics rendering and hardware utilization.
- **Graphica Suite:** Led the development of a comprehensive suite of tools to unify shader languages, including:
  * *CrossTL:* Developed a Python AST-based translator capable of converting shader code into multiple target languages (HLSL, GLSL, Metal, SPIR-V, etc.), achieving over 2,500 monthly downloads on PyPI.
  * **CrossGL Compiler:** Built a custom shader language, leveraging MLIR and LLVM, that compiles directly to binaries for backends like DirectX, OpenGL, Vulkan, and Metal, eliminating the need for manual shader porting.
- **Dyson Platform:** Engineered a unified hardware abstraction layer addressing hardware fragmentation across CPUs, GPUs, TPUs, and FPGAs:
  * Created an API platform enabling users to access and utilize hardware across major cloud providers (AWS, GCP, Azure, Intel, NVIDIA).
  * Designed an AI agent to intelligently route tasks to the most suitable hardware based on user requirements, optimized for High-Performance Computing (HPC) scenarios like physics simulations.
- Led a team of 20 engineers, driving the design, development, and deployment of innovative solutions.
- Actively raising pre-seed funding, securing partnerships with cloud providers, and negotiating credits worth $500K across AWS, GCP, and Azure.
- Collaborated with industry stakeholders, cloud service providers, and key clients to define project roadmaps and ensure alignment with market needs.

The Applied AI Company (AppliedAI)   Abu Dhabi, UAE
AI/ML Engineer   *Mar 2024 – Apr 2024, Internship*

- Spearheaded the development of an innovative AI application designed to streamline medical coding processes, enhancing efficiency for medical clients.
- Engineered and deployed robust Python scripts using AWS Lambda and SQS workflows, ensuring scalable and reliable application performance.
- Leveraged OpenAI API to automate the extraction and processing of data from medical reports, significantly reducing manual coding errors and workload.
- Integrated Retrieval-Augmented Generation (RAG) and vision technologies to accurately interpret and categorize complex medical information, improving the accuracy of medical billing and coding.

Unify   London, United Kingdom (Remote)

DevRel Lead   *Nov 2023 – Apr 2024, Full-time*

- Initiated and maintained a collaboration with Vaunt to establish a recognition and award system for community contributors.
- Spearheaded community outreach initiatives to strengthen developer engagement and promote active participation in open-source projects.
- Managed the entire volunteer pipeline, including recruitment, hiring, onboarding, and promotion.
- Implemented structured processes for volunteer engagement, enhancing their experience and fostering growth.
- Actively contributed to projects, leveraging technical expertise to ensure the delivery of high-quality solutions.
- Served as the primary communication bridge between the development team and external contributors, facilitating effective idea exchange and feedback.
- Streamlined collaboration and problem-solving efforts, improving the efficiency and productivity of development endeavors.
- Represented Unify at various forums and events, advocating for our technologies and enhancing the company's reputation.
- Created tasks and ideas for projects and hackathons, fostering innovation and practical application of technologies.
- Developed automation for the contributor program using Google App Script, GCP functions, and GitHub CI/CD, optimizing operational processes.

Unify   London, United Kingdom (Remote)

Machine Learning Engineer   *Jun 2023 – Dec 2023, Internship*

- Engineered a custom Python code reformatter specifically for Ivy's backend, enhancing code organization and logical flow.
- Implemented intelligent sorting of code components such as imports, classes, functions, and variable assignments for improved consistency.
- Advanced code readability by intelligently clustering related functions and automating the insertion of explanatory headers.
- Devised a sophisticated file pattern recognition algorithm to enforce uniform formatting across specific file types.
- Pioneered the integration of Apple Silicon GPU acceleration into Ivy, significantly boosting performance on next-generation devices.
- Acted as the main liaison for a key Ivy contributor, streamlining communication, feedback assimilation, and joint problem-solving efforts.
- Continuously involved in the evolution and refinement of the code formatter, keeping it abreast of the latest industry advancements.
- Integral in the design and creation of machine learning algorithms and systems within Ivy's core development team.

- Contributed extensively to Ivy's open-source GitHub repository, focusing on Jax, PaddlePaddle, Tensorflow, and PyTorch frontends.
- Coordinated and oversaw the approval of Pull Requests, ensuring their quality aligns with Ivy's standards before integration.
- Collaborated with a diverse team of developers and data scientists to elevate software efficiency and reliability.
- Persistently explored and adopted cutting-edge technologies and frameworks to remain at the forefront of machine learning innovation.
- Rose to the position of Lead Volunteer, orchestrating the efforts of over 85 volunteers in various initiatives and projects.

Copeland   Dubai, UAE

Information Technology Business Analyst   *Jun 2023 – Jul 2023, Internship*

- Designed and implemented a multi-threaded web scraper using Python's Selenium WebDriver to automate data extraction from a secure online portal, handling login authentication and dynamic page navigation.
- Optimized performance with multi-threading by utilizing Python's threading module to parallelize the web scraping process, significantly reducing overall execution time.
- Implemented a semaphore to regulate the number of concurrent threads, effectively controlling system resource usage and ensuring scalability without overloading system capabilities or breaching website's request limits.

- Improved code modularity and reusability by creating reusable functions for tasks such as logging in and navigating website pages, enhancing code readability, maintainability, and reusability.
- Managed error handling and exceptions robustly, ensuring consistent performance and data integrity of the scraper.

Emerson
Dubai, UAE

Information Technology Business Analyst
Jun 2022 − Jun 2023, Internship

- Automated ASN upload process on Oracle using Python and Power Automate, reducing operational time by two days per week.
- Developed multiple ETLs in Domo to streamline data transformations and analytics, enhancing data processing capabilities.
- Implemented advanced data transformations for data science applications using Python, Pandas, Numpy, and Domo's API, improving data utilization and insights.
- Created Python programs utilizing the Oracle_cx module for efficient data extraction, transformation, and mass data uploads, optimizing data management processes.
- Developed a web scraper in Python to automate data extraction from Teamcenter, enabling automatic downloads of specified files and saving 2 hours of work per day.
- Assisted users in creating sophisticated Excel sheets with advanced formulas and functions, enhancing data organization and analysis efficiency.
- Employed Python and Tesseract OCR to develop a machine learning model that converts images of data into Excel spreadsheets, substantially streamlining the data entry process.

Heriot-Watt University
Dubai, UAE

Football Club President
Sep 2022 − Jun 2023, Part-time

- Oversaw all club operations, demonstrating strong leadership and management skills, ensuring effective club management and member satisfaction.
- Organized events and managed budgets, fostering club success and growth through strategic financial planning and event management.
- Hired and coordinated coaching staff to enhance team performance, improving player skills and team dynamics.
- Utilized advanced Excel techniques to develop sophisticated scoring and point table systems for tournaments, increasing the accuracy and professionalism of club competitions.
- Maintained accurate inventory records using well-organized Excel sheets, ensuring efficient management of club resources.
- Collaborated effectively with team members and university officials to promote the club and secure necessary support and resources.

Awards & Achievements

Advanced Standing and Scholarship: Awarded for scoring above 85% in CBSE 12th finals, resulting in the skipping of the first year and receiving a 50% scholarship at Heriot-Watt University. (2021)

Dr. APJ Abdul Kalam Award for Outstanding Student: Awarded to the top-performing students annually throughout India, recognizing exceptional academic and extracurricular achievements. (2019)

Projects

Panthon | *GitHub*

- Developed Panthon, a Python pip package, alongside Arunima santhosh Kumar. It serves as a comprehensive cybersecurity attack simulation library, encompassing a wide array of attacks including DoS, SQL injection, DNS spoofing, and MITM, aiming to enhance security testing capabilities.

Athena | *GitHub*

- Developed Athena, a framework for enhancing the accuracy of Large Language Models (LLM) by integrating external tools such as Google Calendar, Wolfram Alpha, a code interpreter, and OpenWeather. Aimed to extend the functionality and applicability of LLMs across various real-world tasks.

CERTIFICATES

Google *May 2022*
IT Automation with Python Specialization

Google *May 2022*
Data Analytics Specialization