SIDDHARTH SHARMA
MSc. | Artificial Intelligence
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Skill Set

Languages: PYTHON, C, C++, C#, JAVA, .net, AJAX, HTML, XML, CSS, Apex Programming, Apex Data Loader, Visualforce Pages, Lightning Design System, JAVASCRIPT(JS), SQL, NoSQL.

Platforms: Salesforce Sales Cloud, Unity3D, Unreal Engine 4, MongoDB, Android Studio, Visual Studio, VS Code, GitHub, Google Colab.

Education

- **Master of Science (M.S.) in Artificial Intelligence from Heriot-Watt University, Edinburgh, Scotland, UK, from Sept'22-Aug'23**
  - Advanced specialist program providing a comprehensive understanding of practical applications of AI, with a particular focus on the robotics industry.
  - Courses in Human-Robot Interaction, Intelligent Robotics, Biologically Inspired Computation, Data Mining & Machine Learning, and Advance Human-Computer Interaction, among others, have provided a strong foundation in AI and its various subfields.
- **Projects:**
  - **Cozmo Robot Demo**
    - Implemented external APIs (OpenCV and Google Mediapipe) for the Cozmo robot. This allowed the robot to see and track objects, which was necessary for the memory game.
    - Designed a memory game for cognitive improvement in the elderly, with results sent to the carer/doctor. The game was designed to be engaging and challenging, while also providing a valuable tool for tracking cognitive decline.
    - Conducted an evaluation study to test the project's feasibility. The evaluation study showed that the game was effective in improving cognitive function in the elderly.
    - Completed as part of a group of three. Coded in Python.
  - **Genetic Algorithm**
    - Implemented the Genetic Algorithm (GA) from scratch using Python.
    - Conducted experiments comparing GA performance on three benchmark functions: Sphere function, Rastrigin function, and Styblinski–Tang function.
    - The best solution found in each run was recorded.
    - The results showed that the GA was able to find good solutions to the benchmark functions.
  - **Multi-layered Artificial Neural Network**
    - Implemented a configurable multi-layer ANN architecture from scratch using the Python libraries numpy and tensorflow.
    - Trained the ANN on the UCI Breast Cancer dataset and investigated the impact of hyperparameters on binary classification.
    - The hyperparameters investigated were the following:
      - Number of hidden layers
      - Number of neurons per hidden layer
      - Learning rate
    - Prepared a report with experimental results, including tables and plots.
    - Completed as part of a group of two. Coded in Python.
  - **Robot Simulation**
    - Implemented Behaviour-Based Robotics (BBR) and Evolutionary Robotics (ER) approaches to control an e-puck robot in a maze.
    - Objective: Create the quickest robot exploring the maze while searching for the reward zone.
    - Completed as part of a group of three. Coded in Python.
    - Platform used was WeBots.
    - The BBR approach used the Braitenberg method. The ER approach used a GA.
- **Bachelor of Technology (B.Tech) in Computer Engineering from NMIMS' Mukesh Patel School of Technology Management & Engineering, Mumbai, India from July'14 to Aug'18**
  - Comprehensive program covering software engineering, programming languages, computer networks, databases, and algorithms.

- Key courses include Artificial Intelligence, Data Structures and Algorithms, Computer Organization and Architecture, Operating Systems, and Object-Oriented Programming.

- **Projects:**
  - **Dustbuster: A vacuum cleaning Bot**
    - Developed an automated vacuum cleaning bot with an auto-docking function. The bot was able to autonomously navigate a room and clean up dirt and debris.
    - Resulted in the publication of a paper in the International Journal of Advanced Research in Computer Science. The paper described the bot's design, implementation, and its evaluation results.
    - Completed as part of a group of three.
    - The bot was assembled from a variety of components, including a chassis, sensors, and a vacuum cleaner motor.
    - The Arduino Uno was programmed to control the movement of the bot. The Arduino Uno was programmed to use the sensors to navigate the room and avoid obstacles.

Professional Qualifications/Certifications

- Microsoft Technology Associate: Software Development Fundamentals - Microsoft Institute (2015-16)
- Grade 1 Cyber Security Expert - Lucideus Tech Pvt. Ltd. In (2016)

Professional Experience

- **Senior Engineer at Shri Radha Krishna Marble & Granite (P) Ltd., Sept'19 - June'21**
  - Developed and implemented integrated work processes, including planning, monitoring, and evaluation systems, improving operational efficiency and productivity.
  - Successfully managed projects, ensuring timely delivery within budget while maintaining high-quality standards.
  - Developed in **HTML** and **CSS**.
- **Associate Consultant at IRT Digital Analytics Solutions Pvt Ltd., July'18 - Aug'19**
  - Served as **Lead Support** for East-West Seeds, utilizing Salesforce to manage order placement and tracking.
  - Directly interacted with clients to gather business requirements, formulate solutions, write queries, and test.
  - Provided front-end and back-end support and development in **Apex language** on Sales Cloud of Salesforce, delivering reliable and scalable solutions.
  - Developed **Visualforce pages** and transitioned from classic to lightning in Salesforce.
- **APPIRO, A WIPRO COMPANY (Summer Internship), June'17 - July'17**
  - Developed a recruitment app as a solo project, catering to both companies searching for employees and individuals seeking employment.
  - Utilized software development skills to design and create the app, resulting in an efficient and user-friendly platform.
  - Demonstrated strong project management skills, ensuring timely delivery of the app.
  - Developed in Salesforce Sales Cloud.

Extra-Curricular Activities

- YSL Football League - Jaipur Youth Soccer League 2010
  - Played as a central defender.
  - Gained skills in effective communication, teamwork, and understanding of the game.
- International Business Challenge 2012 - Hwa Chong International School, Singapore
  - Placed 5th out of 12 teams.
  - Designed and built a spy gadget: smart glasses with thermal imaging and sound recording, connected to an intelligence database for the identification of targets.
  - Created a one-minute ad for the product.