DEEPANKAR SHARMA

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Experienced engineer specializing in IoT, Machine Learning and Blockchain technologies. Developed and deployed innovative solutions for electric mobility, smart grids, and transportation networks, using mathematical modeling & simulation, sensor fusion, and neural networks. Demonstrated entrepreneurial skills and achieved tangible outcomes in complex technical landscapes. Adept at product management, resource management, communication and presentation.

SKILLS

Languages: Python, JavaScript, Java, Matlab, C, SQL.
Developer Tools: Git, Truffle, IBM Cloud, Android Studio, Docker, Airflow, Azure ML, Linux.
Frameworks: NumPy, SciPy, Scikit-learn, Django, TensorFlow, MQTT, RESTful APIs, Node.js, Web3.js, MongoDB, Kubernetes.

EXPERIENCE

Knotiloid, India — Founder & Tech Lead

November 2019 - December 2023

- Pioneered smart routines for EVs, leveraging IoT, blockchain, and deep learning (NNs) for optimizing a distributed platform connecting - EVs, charging stations and energy utility companies.
- Developed a MVP showcasing operational and energy efficiency, resulting in a 10-15% reduction in grid overload issues, resolving contention issues at charging stations.
- Implemented charging demand forecasting models using TensorFlow, improving forecast accuracy by 34%, deployed the models on IBM Cloud using Watson Machine Learning and MLOps best practices.
- Led fundraising and investor relations, establishing key partnerships with hardware and sensor suppliers, and EV user data providers.
- Onboarded a state-owned and a private energy utility company and local charging station companies for a successful demo run.

(Django, TensorFlow, IBM Cloud, Airflow, Docker, Truffle Suite, GridLAB, MatPOWER, AnyLogic)

CEDAR, Dehradun, India (Remote) — Technical Consultant

September 2022 - February 2023

- Conducted a study on forest-based resilience during Covid19, funded by The Swedish Research Council for Sustainable Development.
- Applied deep learning to transcribe vernacular Hindi dialect with 80% accuracy to assist in 160+ household surveys and 20+ interviews, digitizing handwritten and audio data.
- Performed multivariate analysis on collected data using Python to identify basic trends.

(Mozilla DeepSpeech, pandas, NumPy, scikit-learn, SciPy.stats, Seaborn, Matplotlib)

General Motors Powertrain Europe, Turin, Italy — R&D Intern

August 2018 - April 2019

- Identified strategic use cases to exploit blockchain and smart contracts in the automotive sector, demonstrating a capacity for innovation and understanding of cutting-edge technologies.
- Conducted a comprehensive analysis of selected use cases, assessing technical and financial feasibility, provided insights for strategic decision-making.
- Crafted a prototype of a Web3-enabled Android decentralized app (DApp), integrating smart contracts with meticulous attention to security.

(V2X comm., Blockchains, Truffle suite, Solidity, Web3.js, Node.js, Android Studio)

STMicroelectronics, Greater Noida, India — Intern

July 2014 - December 2014

- RTL testing & verification of SRAM library for ARM Cortex A7, showcasing technical skills relevant to hardware-software integration.

(Verilog, VHDL, Cadence, Synopsys, Perl, Linux)

EDUCATION

Master of Science, ICT for Smart Societies
Politecnico di Torino, Italy
April 2019

Bachelor of Engineering, Electrical & Electronics
BITS Pilani, India
July 2015

PROJECTS

RobustaFolio

- Developed an innovative tool, transcending traditional MPT using network theory and ML (autoencoders) to create an optimized portfolio.
- Implemented portfolio optimization algorithms, achieving 3.5x Sharpe ratio and 4.5x return-risk ratio than the benchmark.

(Python, pandas, NetworkX, TensorFlow, yfinance)

EthBus

- Created a decentralized app (DApp) for Android which enables automatic payments for public transportation service based on Ethereum.
- Implemented smart contracts for secure and transparent transactions between users and service providers.
- Utilized sensor fusion and geolocation data to trigger payments based on distance traveled and bus routes.

(Java, Android Studio, Web3.js, Solidity, Truffle Suite, Google APIs)

LinkageX Simulator

- Developed a framework to simulate the interaction of the cellular networks within the smart grid system to analyze the impact of energy saving techniques on the overall performance.
- Base stations achieved energy savings of up to 24.6% in the simulated environment.

(Python, NumPy, SimPy, Matplotlib, MATLAB)

Medical Analytics

- Applied machine learning techniques to analyze health data (Parkinson's, Arrhythmia, tumors) and predict outcomes.
- Used supervised & unsupervised learning methods, such as classification, clustering, decision trees, neural networks and image processing to identify patterns and insights from the data.

(NumPy, SciPy, scikit-image, TensorFlow, Matlab)

SensiSpace

- Engineered an IoT solution utilizing predictive modeling and sensor data fusion to transform office spaces into an intelligent connected system.
- Deployed a predictive model using MS Azure ML to forecast room occupancy and energy consumption, controlling actuators to perform needed actions.

(MS Azure ML, MQTT, RESTful APIs, MongoDB, RaspberryPi, Freeboard)

INTERESTS

Music composition (guitar, violin), adventure cycling, RC aircrafts, football, cricket and Formula One.