Arpit Kumar

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Education

Indian Institute of Technology Roorkee Uttrakhand, India
B.tech Engineering Physics 2017 - 2021

Experience

Founder & Director (CTO) AkashaLabdhi Pvt. Ltd. 07/2023 - 04/2024

- Founded and helmed the engineering core for India's only space tech company working on infltatable space habitats.
- Designed, assembled and tested components via making use of Raspberry pi, arduino boards, LoRa Modules, hand soldered prototypes, custom power units,
- Deployed servers on SBCs for data monitoring and feedback loop.
- Researched exotic fabrics and materials (Vektran, Kapton), developed novel methods for simulation of such materials employing tools like OpenModelica, FreeCAD, OpenFOAM with others.
- Managed to keep engineering cost extremely lean while maintaining growth, emphasised heavy usage and contribution to opensource, alongside growing the internal junior engineering core competencies.

Data Scientist Conscent.ai 06/2022 - 05/2023

- Executed upon all AI/ML related projects within the organisation, experimenting with different ways to improve buisness performance.
- Designed and deployed database schemas for MongoDB, ClickhouseDB, wrote internal python tools for data migrations and processing.
- Built data pipelines using tools like kafka, aws lambda, observed and reported processed metrics e.g RFV of users, drop rates of various funnel stages.
- Experimented and built AI features involving GNN based recommender system, GNN based user behaviour analysis and conversion imporovement.
- Wrote APIs for backend for DB queries etc.
- Provided the buisness team with requested metrics along with insights gained from analysis, solved issues like account duplicacy etc.

Lead Reasercher Physics Department X-Ray/CT Lab (IITR) 08/2020 - 04/2021

- Proposed and researched a novel non-invasive imaging solution for fluid flow inside closed systems using X-Ray Computed Tomography.
- Hand built multiple prototypes to generate fluid flow in tubes while being scanned in mini 3D X-Ray scanner.
- Collected data, reverse enginnerd the mesh and performed CFD simulation to improve modeling capabilities.
- Employed tools like SolidWorks, MeshLab, Fiji, arduino (HC-05 bt module) for data collection and others like Matlab, Ansys Fluent for simulation.

Awards and Honors

🥈 **x2** 🥉 **x3** Inter Institute weightlifting and powerlifting competition (SANGRAM IITR - Under 77 Kg) 2017, 2018

Skills

Programming Languages: Python, JavaScript / TypeScript, HTML / CSS, Java
Tools and Frameworks: Git, PyTorch, Keras, scikit-learn, Linux, Vue, React, Django, LaTeX

Publications

P1 **Numerical Investigations and Modeling of Loads on Off-Shore Wind Turbines**
~Siddharth Jena Arpit Kumar
Numerical Investigations and Modeling of Loads on Off-Shore Wind Turbines. Available at SSRN 3981513