

Arpit Kumar

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Education

Indian Institute of Technology Roorkee

B.tech Engineering Physics

Uttarakhand, India

2017 - 2021

Experience

Founder & Director (CTO)

[AkashaLabdhi Pvt. Ltd.](#)

07/2023 - 04/2024

- Founded and helmed the engineering core of India's singular space tech company building inflatable space habitats.
- Designed, assembled and tested components via use of Raspberry pi, arduino boards, LoRa Modules, hand made power boards and other embedded systems.
- Deployed Python and C++ based servers on SBCs for data monitoring and comm systems.
- 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 business performance.
- Designed and deployed database schemas for MongoDB, ClickhouseDB, wrote internal python tools for data migrations and processing.
- Built data pipelines employing kafka, AWS lambda, observed, reported and processed metrics e.g RFV of users, drop rates of various funnel stages, churn rate etc.
- Integrated AI features involving GNN based recommender system, GNN based user behaviour analysis to enhance customer conversion.
- Wrote APIs for backend handling DB queries, cron tasks, data migration with other general work related to DB management.
- Provided the business team with required metrics along with insights gained from analysis (user churn/behaviour on site), solved issues related to redundant data and storage management.

Lead Researcher

[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 engineered 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: 🦋 Haskell, ⚙️ Nix, 🐍 Python, 🇨🇸 C++ 🇯🇸 JavaScript / 🇹🇸 TypeScript (🇪🇻 HTML / 🇨🇸 CSS), 🇸🇵 go

Tools and Frameworks: linux+gnu ❤️, git, gh, nix, pip, bash, tee, linux-pipes, udev, evdev, fish, zoxide, L^AT_EX, Markdown, SQL, MongoDBQueryLang, Godot engine ++ Many other CLI tools and general software tools.

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