Saumik Dana, dana.spk5@gmail.com, +1-512-986-9638

Summary

As a US permanent resident with a Ph.D. from UT Austin, I am a Computational Engineer skilled in fintech, geoscience, and computational physics. My work integrates numerical methods, machine learning, and Bayesian inference. I have been instrumental in securing key Series A funding for a surgical navigation startup, and leading the SaaS expansion at a fusion startup into fintech analytics. I have also contributed to significant academic advancements in large dataset simulations and software for inverse problems. I aim to contribute to innovative teams and projects, driving technological progress.

Work Experience

Computational Engineer, VISIE Inc., Austin, TX **Aug 2023-Nov 2023**

- Secured $8.2 million in Series A investment by engineering a robotic control system enhancing precision in movement and image registration scanning.
- Optimized deployment in the DevOps pipeline by streamlining the release of package sub-components.

Computational Lead, Sapientai LLC, Austin, TX **Aug 2022-Mar 2023**

- Diversified SaaS offerings into financial analytics by pioneering sparse greedy algorithm based data driven discovery of PDE for stock price prediction.
- Enhanced framework versatility via DevOps, cross-validation and machine learning.

Postdoctoral Associate, University of Southern California, Los Angeles, CA **Nov 2020-July 2022**

- Enabled 50% speed-up in large unstructured dataset geoscientific simulations using cloud computing.
- Introduced a software suite for inverse problems with Bayesian Markov Chain Monte Carlo approaches.

Postdoctoral Associate, Baylor College of Medicine, Houston, TX **Feb 2020-Oct 2020**

- Streamlined genetic analysis processes by innovating and deploying new forensic biology tools.

Postdoctoral Associate, Rensselaer Polytechnic Institute, Troy, NY **Aug 2019-Jan 2020**

- Cut power loss by 20% through a collaborative initiative with a NYC based wind turbine startup.

Postdoctoral Associate, Los Alamos National Lab, Los Alamos, NM **Jan 2019-July 2019**

- Drove a 1000 fold acceleration of subsurface transport simulations through a reduced order model.

Graduate Intern, Siemens Corporate Technology, Princeton, NJ **June 2018-Sept 2018**

- Enhanced process accuracy in additive manufacturing by executing a new thermal simulation tool.

Skills

- **Programming Languages:** Python, C++
- **Software & Tools:** Git, PyTorch, SciPy, Scikit-Learn, Pandas, StatsModels, Seaborn, HyperOpt, Jupyter Notebook, OpenCV, MPI, Conda, Poetry, Qml, PySide6, HTML, CSS, AWS, Azure
- **Professional Profiles:** `https://github.com/SaumikDana`, `https://saumikdana.github.io/`

Education

Doctor of Philosophy in Engineering Mechanics, University of Texas at Austin **Aug 2012-Dec 2018**

- Ensured continual engagement with NSF and DOE proposals by rendering previously unattainable large unstructured dataset geoscientific simulations.
- Published 5 papers in peer-reviewed journals on iterative solution techniques for multiphysics.
- Presented findings at multiple national labs, engaging with leading experts to foster collaborative efforts.

Master of Engineering in Mechanical Engineering, Indian Institute of Science **Aug 2009-June 2011**

Bachelor of Engineering in Mechanical Engineering, University of Mumbai, India **Aug 2004-May 2008**