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

Summary

Dynamic and results-driven computational engineer and U.S. permanent resident with a Ph.D. in Engineering Mechanics from UT Austin and experience in fintech, geoscience, bioinformatics and computational physics. I have been instrumental in securing key Series A funding for a surgical navigation startup, expanding a fusion startup into fintech analytics, and nurturing geoscientific collaborations in academia and national labs. My expertise lies in numerical methods, machine learning, and Bayesian inference.

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, C++, Fortran, MATLAB, SQL
- **Software & Tools:** Git (GitHub, Bitbucket), PyTorch, SciPy, Scikit-Learn, Pandas, StatsModels, Seaborn, HyperOpt, Jupyter Notebook, Vim, Gnuplot, Boost, Eigen, Matplotlib, NumPy, OpenCV, MPI, Conda, Poetry, Django, 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**