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 in a short time-span. I've been instrumental in securing 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.

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/`

Work Experience

Computational Engineer, VISIE Inc., Austin, TX **Aug 2023-Nov 2023**
- Contributed significantly to securing Series A funding by developing an advanced robotic control system that facilitated precise 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 of the fusion startup into financial analytics by engineering the inaugural stock price predictor.
- Enhanced model reliability and predictive accuracy by implementing comprehensive cross-validation and facilitating CI/CD using GitHub Actions.

Postdoctoral Associate, University of Southern California, Los Angeles, CA **Nov 2020-July 2022**
- Enabled an order of magnitude speed-up in large-scale geoscientific simulations using cloud computing.
- Introduced a software suite for inverse problems with innovative Bayesian MCMC 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**
- Reduced power loss by 20% through leading a collaborative initiative to re-engineer a vertical axis wind turbine design with a NYC startup.

Postdoctoral Associate, Los Alamos National Lab, Los Alamos, NM **Jan 2019-July 2019**
- Catapulted simulation speeds by 3 orders of magnitude by spearheading the development of a reduced order model for subsurface flow and transport.

Graduate Intern, Siemens Corporate Technology, Princeton, NJ **June 2018-Sept 2018**
- Enhanced process accuracy and component quality in laser-based additive manufacturing by conceiving and executing a new thermal simulation tool.

Education

Doctor of Philosophy in Engineering Mechanics, University of Texas at Austin **Aug 2012-Dec 2018**
- Rendered previously unachievable large-grid geoscientific simulations on a supercomputer.
- 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**