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. Spearheaded the development of groundbreaking analytical tools across various disciplines, significantly enhancing business offerings and research capabilities. Proven expertise in numerical methods, machine learning, and Bayesian inference.

Skills

- **Programming Languages:** Python, C, C++, Fortran, MATLAB, SQL
- **Software & Tools:** Git, PyTorch, SciPy, Scikit-Learn, Pandas, StatsModels, Seaborn, HyperOpt, Jupyter Notebook, Vim, Gnuplot, Boost, Eigen, Matplotlib, NumPy, OpenCV, MPI, Conda, Poetry, Flask, FastAPI, Qml, PySide6, HTML, CSS, AWS, Azure, Linux, Windows, Git (GitHub, GitLab, Bitbucket)
- **Professional Profiles:** `https://github.com/SaumikDana`, `https://saumikdana.github.io/`

Work Experience

Computational Engineer, VISIE Inc., Austin, TX **Aug 2023-Nov 2023**
- Secured key Series A funding through the pioneering development of an advanced robotic control system that enabled 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**