

# HOSSEIN SHARIFI

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## RELEVANT EXPERIENCE

**Computational Scientist – Genetesis** August 2023 – present

- In-Silico modeling of cardiac electrophysiology and forward modeling of magnetocardiography (MCG).

**Industry Solution Technical - Intern – Dassault Systèmes** May 2022 – July 2023

- Created a surrogate model of the mitral valve using machine learning techniques to estimate the clinical characteristics of virtual patients trained by physics-based FE models.

**Research Assistant – University of Kentucky** August 2018 – May 2023

- Developed a multiscale FE model of left ventricular mechanics using FEniCS solver.

**Research Assistant - University of Kentucky** August 2016 – May 2018

- Investigated the load rating of in-service culverts using finite element modeling.
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## TECHNICAL SKILLS

**Computational Mechanics:** Finite-element modeling (Explicit and Implicit), Continuum mechanics, Tissue biomechanics, multiscale modeling

**Machine Learning:** Gaussian Process Regression, Classification, Clustering, Deep learning, Neural network

**Software and programming languages:** Abaqus, LS-DYNA, ANSYS, FEniCS project, Python (e.g. NumPy, SciPy, Pandas, scikit-learn, Keras, TensorFlow, Matplotlib, seaborn), MATLAB, HTML, JavaScript

## SELECTED CERTIFICATES

- [Machine learning with python](#)
- [Introduction to Deep Learning & Neural Networks with Keras](#)
- [Introduction to Computer Vision and Image Processing](#)
- [Introduction to Data Science in Python](#)

## EDUCATION

**University of Kentucky** Ph.D. in Mechanical Engineering (2018 – 2023)

**University of Kentucky** MS in Civil Engineering (2016 – 2018)

## SELECTED PUBLICATIONS

- **Sharifi H.**, Mehri M., Mann C. K., Campbell K. S., Lee L., Wenk J. F. *Multiscale finite element modeling of left ventricular growth in simulations of valve disease.*, Ann Biomed Eng, (2024). <https://doi.org/10.1007/s10439-024-03497-x>
- **Sharifi H.**, Lee, L., Campbell K. S., Wenk J. F. *A multiscale finite element model of left ventricular mechanics incorporating baroreflex regulation.*, Computers in Biology and Medicine, (2024). <https://doi.org/10.1016/j.compbiomed.2023.107690>