HOSSEIN SHARIFI

Mason, OH | 859.213.6972 | hosseinsharifi71@gmail.com | hosseinsharifii.github.io

RELEVANT EXPERIENCE

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

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

- Executed hundreds of FEM simulations of mitral valves (Explicit FEM).
- 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.

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**., Mann, C. K., Rockward, A. L., Mehri M., Mojumder J., Lee L, Campbell K. S. & Wenk J. F. *Multiscale simulations of left ventricular growth and remodeling*. Biophys Rev (2021). https://doi.org/10.1007/s12551-021-00826-5
- **Sharifi, H**., Mann, C. K., Wenk J. F., & Campbell K. S. *A multiscale model of the cardiovascular system that regulates arterial pressure via closed loop baroreflex control of chronotropism, cell-level contractility, and vascular tone*. Biomech Model Mechanobiol (2022). https://doi.org/10.1007/s10237-022-01628-8