

Parag Shendye

M.SC COMPUTER AIDED MECHANICAL ENGINEERING

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Summary

- Software Developer in the field of Data Science and Internet of Things (IoT) at Incoretex GmbH, Aachen, Germany
- Successfully completed Masters in Computer Aided Mechanical Engineering from RWTH, Aachen
- Interested in machine learning, data analysis, software development and IoT
- Ability to work in team and independently across diverse domains
- ASML Technical Scholarship Program awardee (2018-2020)

Work Experience

Incoretex GmbH

SOFTWARE DEVELOPER

Aachen, DE

Jun 2022 - Present

- Product owner for the development and rollout of IoT system for cloud integration of fitness devices
- Development of MCU firmware and cloud infrastructure for the collection and analysis of the fitness data
- Selection of Artificial Neural Network architecture and training for deployment in pressure sensor based foot size measurement system
- End-to-end development of prototypes and Proof of Concepts (PoCs)
- Mentoring of interns and student assistants

Incoretex GmbH

SOFTWARE DEVELOPER (PART-TIME)

Aachen, DE

Mar. 2020 - May. 2022

- Gesture and object recognition utilizing Deep learning on pressure sensor data
- Development of infrastructure and tools for training and monitoring of machine learning applications
- Classification of sleep position with Convolutional Neural Network (CNN) model using the data obtained from smart mattress sensor
- Algorithm for multi-person tracking software for Deutsche Bahn (DB)
- Fullstack development of a webapp for visualization of real time data from pressure distribution maps.

Chair of Operations Research, RWTH

STUDENT RESEARCH ASSISTANT

Aachen, DE

Apr. 2019 - Apr. 2020

- Responsible for further development of BEAM (A multi-agent transport simulation software)
- Development of interactive data analysis and visualization tool using React and Deck.gl

Institute of General Mechanics, RWTH

STUDENT RESEARCH ASSISTANT

Aachen, DE

Feb. 2018 - Dec. 2019

- Molecular dynamics simulations, analysis and visualization
- Published research on *Molecular dynamics investigation of the shock response of silica aerogels in Materialia* 2019

Academic Qualifications

Rheinische Westfälische Technische Hochschule

MASTERS IN COMPUTER AIDED MECHANICAL ENGINEERING

Aachen, DE

Oct 2021

C.G.P.A: 1.9

Savitribai Phule Pune University

BACHELORS IN MECHANICAL ENGINEERING

Pune, IN

2016

Aggr: 75%

Projects

Development of a model and software implementation for de-noising smart-textile matrix-pressure sensors and verification of the model with image recognition application

MASTER-THESIS

May 2021 – Sep 2021

- Categorization of noise types and development of suitable software filters for textile pressure sensors
- Development of GUI based tool to optimize selection of sensor map de-noising models
- Proof of concept by performing object recognition on pressure sensors of different types and resolutions after denoising

Development of Neural Network Potential Energy function for Silicon

MINI-THESIS

July. 2019– Jan. 2020

- Designed and trained an artificial neural network potential with tensorflow to replace the Stillinger-Weber (SW) potential energy function
- The obtained results could model the potential energy function very closely

Subjects

University courses

- Tensor Algebra, Advanced Software Engineering, Scientific Computing with Python, Data Analytics and AI for engineers
- Finite Element Method, Non-Linear Structural Mechanics, Failure of Structures, Computational inelasticity, Molecular Dynamics

Massive Open Online Courses

- Machine Learning with python(IBM), Neural Network and Deep Learning, Mathematics for Machine Learning(Multivariate Calculus), Improving deep Neural Networks, Sequence Models

Professional and personal skills

Programming

Python ● ● ● ● ● JAVA ● ● ● ● ●
Typescript ● ● ● ● ● C++ ● ● ● ● ●
SQL ● ● ● ● ●

Technical Skills

docker, git, Cmake, Conan, Mlflow, OpenCV, Tensorflow

Web Skills

FastAPI, websockets, React, grafana

Languages

English: Native
German: Business Fluent

Awards and Interests

ASML

Veldhoven, NL

TECHNOLOGY SCHOLARSHIP

Sep. 2018 - Sep. 2020

- Selected for Technical Scholarship Program and received a highly endowed award
- Training in personal development, presentation, conflict handling and other business skills

Hobbies

- Ukulele, Table Tennis
- Reading about politics and history
- AI, LLMs