Shriram Ravindra Ashirgade

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Education

August 2017-Current

Master of Science in Applied Mathematics,
Delft University of Technology, The Netherlands
Track: Computational Science and Engineering
Thesis: "Stochastic Modelling of Coastal Waves(at Deltares)"
Advisor: Dr. Martin Verlaan

August 2013-May 2017

Bachelor of Engineering(Honours) in Mechanical Engineering
Birla Institute of Technology and Science,Pilani, India
Thesis: "Analysis of Oscillator with Backlash Type Non-linearity and Parametric Excitation"
Advisor: Dr. Amol Marathe **GPA: 9.02/10, Distinction**

August 2012-May 2013

Higher Secondary School Certificate **Maharashtra State Board**,India
GPA: 84.5/100

Experience

Apr, July-Sept 2018

Research Intern at **Returns by Design B.V.** (Associate firm of Duyfken Trading Knowledge B.V.), Amsterdam, The Netherlands
Project: *Bayesian Approach for Detecting False Positives in Investment Strategies*

- Worked on linear regression machine learning algorithms to fit returns of a portfolio consisting of several bonds and ETFs.
- Formulated a Bayesian framework to quantify the quality of the mathematical model in describing the structure in the financial data and to predict the out-of-sample performance based on the in-sample performance and the model complexity.
- Implemented the framework on programmatically generated data as well as real-life data to compare the performance of models of varying complexities.

May-July 2016

Research Intern at **Indian Institute of Technology, Guwahati**, India
Project: *Comparison of Explicit Time Integration Schemes for Dynamic Problems*

- Compared five different explicit time integration schemes on basis of their accuracy, convergence and computational effort for a linear as well as a nonlinear dynamical system.
- Suggested norms for selection of integration scheme depending on required accuracy and type of system analyzed.

May-July 2015

Traineeship at **Defense Research and Development Lab, Hyderabad**, India
Project: *Stress analysis and designing of missile shell, Kinematic and dynamic analysis of industrial robots.*

- Calculated optimal shell thickness by analyzing stresses and strains on ballistic missile using given dataset.
- Carried out the kinematic and dynamic analysis of industrial robots using computational methods.

Academic Projects

Master's Projects

Title: Chat-bot Analysis with Natural Language Processing, (a.s.r. Nederland)

Description:

- Carried out detailed analysis of a.s.r chat-bot data, historical as well as real-time, using natural language processing and classification algorithms.
- Suggested scope of improvement for better resource allocation and user experience.

Title: Secondary Recovery in Oil Reservoirs (TU Delft)

Description:

- Implemented numerical as well as analytical approach to simulate secondary oil recovery process.
- Estimated optimal process time for maximal recovery under cost constraint.

Bachelor's Projects

Title: Analysis of Oscillator with Backlash Type Non-linearity and Parametric Excitation(BITS Pilani)

Description:

- Implemented the method of harmonic balance numerically as well as analytically to obtain frequency response of the system with backlash and parametric excitation.
- Devised a pseudo-linear method of multiple time scales for strongly-nonlinear oscillator to study steady-state response.

Title: Application of Fuzzy Logic in Material Selection (BITS, Pilani)

Description:

- Designed a material selection system based on concepts of fuzzy logic which, based on fuzzy inputs, suggests the suitable material for given application.

Scholarships and Certificates

- State Bank of India(SBI) Merit Scholarship.
- Merit scholarship from Birla Education Trust

Extracurricular

- Student assistant for bachelors level mathematics courses at TU Delft
- Publicity coordinator for technical festival APOGEE and the cultural festival OASIS of BITS, Pilani
- Head of the Department of Art Design and Publicity BITS, Pilani
- Experience in tutoring undergraduate engineering and mathematics courses.

Skills

Programming Languages: Python, JavaScript, Julia, Java(basic), LaTeX
Software Packages: MATLAB, Mathematica, Maple, Adobe Creative Suite, MS Office

Interests and Activities

Painting, Sketching, Digital Artwork, Reading
Generative art using Processing and p5.js