THIBAULT DODY

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WORK EXPERIENCE

Principal Engineer at JENSEN HUGHES, Wakefield MA (Jan. 2017 to Present)

- Part of the Data Automation and Machine Learning team. This small group leverages analytical tools (python, VBA, Access) to improve the efficiency of daily engineering for the rest of the company.
- Currently developing an engineering software dedicated to processing and manipulating seismic records (Git & .NET).
- Responsible for the development and maintenance of our cost-estimate tool (VBA).
- Wrote python script to perform assessment of large 3D finite element models.
- Served as technical lead for the development of a software dedicated to post-processing piping analysis for nuclear power plants (.NET).
- Served as project manager on various projects including probabilistic assessment for an oil storage tank, tornado missile impact analysis.
- Responsible for the update and maintenance of our internal QA tracking software (.NET and SQL Server).
- Performed work on database-driven projects (Access). These projects help power plants to combine the results of their probability-risk assessments and select equipment requiring maintenance.
- Involved in risk analyses and assessment of plant safety procedures. This work consists of identifying key risk contributors and performed probabilistic assessments.
- Performed deterministic and probabilistic assessments of equipment and structures of nuclear power plant in the US, Taiwan, and South Korea.
- Produced and reviewed engineering analyses and produces reports intended for technical and non-technical personnel.

Senior Engineer at Stevenson & Associates, Woburn MA (June 2013 to Dec. 2016)

- Performed seismic upgrade for a nuclear power plant in Taiwan
- Produced seismic and thermal analyses of the existing safety-related piping system
- Redesigned piping systems to withstand the new seismic demand
- Served as technical lead for a portion of this multi-year project
- Produced 3D Finite Element modeling of concrete/steel structure for Seismic Probability Risk Assessment
- Performed probabilistic analysis of a dome truss structure against thermal and seismic loading.

EDUCATION

Massachusetts Institute of Technology – Master of Engineering (2012-2013)

- Candidate for the Master of Engineering in High Performance Structures
- Thesis: "*Damping Optimization Using Transfer Function Criteria*" (using Matlab)

ESTP, Paris France – Bachelor/Master of Sciences in Civil/Structural Engineering (2010-2013)

- Ranked top 2% (220 students)
- Relevant coursework
  - Applied Statistics/Advanced Probability
  - CS: Python, Integral Calculus/Differential Calculus
  - Advanced Algebra, Numerical Analysis
  - Numerical Optimization

Lycée Victor Hugo, Besancon France – Bachelor of Sciences (2008-2010)

- Intensive two-year program to prepare engineering student to the engineering school entrance exams.
- This program focuses on teaching advanced mathematics, physics, mechanical engineering and English.

VOLUNTEERING

Tutoring Plus, Cambridge (Oct. 2015 – Oct. 2017)

- 2016-2017: Tutoring sessions for two high-school students (8th and 10th grade) in Math and Physics.
- 2015-2016: Tutoring sessions for two high-school students (11th grade) in Math. Involved in college selection and application process.

RELEVANT SKILLS

- .NET, SQL Server, VBA, Git, Tableau
- Python
    - Data: Pandas, Numpy
    - Visualization: matplotlib, Bokeh, seaborn, nxviz
    - Machine learning: scikit-learn
    - Deep learning: Keras, Tensorflow
    - Others: scipy, networkX, Spark,

INDEPENDENT COURSEWORK

- Deep Learning – Deep Learning.ai
    - This set of courses covers the fundamentals of Artificial Neural Networks and their application using Python.
    - Neural Networks and Deep Learning;
    - Improving Deep Neural Networks (hyperparameter tuning, regularization and optimization);
    - Structuring Machine Learning Projects (datasets, transfer learning, end-to-end deep learning);
    - Convolutional Neural Networks (LeNet, AlexNet, VGG16/19, ResNets, Inception, YOLO, classification, object detection, FCC, face recognition, one shot learning, neural style transfer);
    - Sequence Models (RNN, GRU, LSTM, word representation, seq2seq architecture, attention model).
- Advanced Machine Learning – Coursera (in progress)
    - Data Science Competition;
    - Bayesian Methods for Machine Learning (GMM, Gaussian Process, Topic Modeling);
    - Practical Reinforcement Learning;
    - Deep Learning for Computer Vision;
    - Natural Language Processing
- TensorFlow in Practice – Deep Learning.ai
- Statistic with Python – Coursera
- Data Visualization with Tableau - Coursera

PROJECT

- https://github.com/tdody
- https://tdody.github.io/projects/

LANGUAGES

- French (fluent)
- English (fluent)

WORK AUTHORIZATION

- Authorized to work in the US without sponsorship.