Scott Ladenheim

Employment history

2019-2022 NL + USA **Senior Analyst Programmer**
Tessella/Hybrid Intelligence, Capgemini

Quantum computing

- Conducted the first quantum computing research project for Hybrid Intelligence's technology accelerator program.
- Used IBM Python quantum computing SDK Qiskit to solve combinatorial optimization problems.
- Accelerated the company's internal quantum computing strategy by creating company-wide training tutorials and serving as supervisor for new quantum computing research projects.

Technical team lead

- 2+ years of experience leading teams of developers/testers on data capture and analysis production websites for multinational consumer goods and pharmaceutical companies.
- Developed the front- and back-end software capabilities; orchestrated the assignment and completion of agile development tasks; communicated progress and technical issues to stakeholders.
- Delivered high-quality data capture and analysis tools on time and within budget.

Consultancy

- Analyzed the data landscape for a major US based consumer goods company.
- Delivered proof-of-concept Python scripts which helped improve their existing data capture and automated the process of linking historical and current data.

2017-2019 NL **Software Engineer**
Next Ocean B.V.

- ~2 years of experience as head software engineer developing algorithms to predict the wave-motions of a ship in real-time.
- Implemented the C++ code to calculate the wave-motion predictions and the Gitlab CI/CD pipelines.
- Won the Offshore Energy 2017 Best Innovation award.

2015-2017 UK **Postdoctoral Research Associate**
University of Manchester

- Conducted research modeling the heat flow in 3-D integrated circuits
- Built software that computed thermal maps of circuit geometries. The software allowed for adaptive refinement in hotspot regions and outperformed existing softwares in terms of accuracy and speed.

2009-2015 USA **Research and Teaching Assistant**
Temple University

- Conducted research on iterative methods to solve linear systems arising from computational engineering.
- Thesis: Constraint preconditioning for saddle point problems
- Awarded outstanding research award in 2015
- Taught courses ranging from introductory level calculus to ordinary differential equations

Skills

C/C++, CUDA, C#
Python, R SQL
Angular/Typescript, HTML, CSS
Tensorflow, Qiskit, Scikit-learn
Git/GitLab
Azure DevOps
Matlab

Education

Ph.D Mathematics
Temple University, Apr 2015
M.A. Mathematics
Temple University, Aug 2012
B.S. in Mathematics
Syracuse University, May 2009

Awards

Best Innovation in Offshore Energy 2017
Next Ocean
Award for Outstanding Research 2015-2016
Temple University
Student Paper Competition Second Prize
13th Copper Mountain Conference on Iterative Methods 2014

Publications

Constraint Preconditioning for the Coupled Stokes-Darcy System, Prince Chidyagwai, Scott Ladenheim, and Daniel B. Szyld, SIAM Journal on Scientific Computing, vol. 38 (2016) pp. A668-A690
Multipreconditioned GMRES for Shifted Systems, Tania Bakhos, Peter K. Kitanidis, Scott Ladenheim, Arvind K. Saibaba, and Daniel B. Szyld, SIAM Journal on Scientific Computing, vol. 39 (2017) pp. S222-S247
The MTA: An Advanced and Versatile Thermal Simulator for Integrated Systems, Scott Ladenheim, Yi-Chung Chen, Milan Mihajlović, and Vasilis F. Pavlidis, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 37 (2018) pp. 3123-3136

Languages

English (mother tongue)
Dutch, Spanish (basic)