(970) 439-1667
Ormond Beach, FL
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Arni Steingrimsson

Director of Data Science, ML, and AI

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An executive with more than 12 years of engineering experience and 8 years of experience in Data Science, Machine Learning, and Artificial Intelligence. Director during the day and hands on data scientist at night. Responsible for Analytic's revenue growth, team structure, technical requirements, processes, and execution. Responsible for building out Data Science and AI service offerings that serve clients in Retail, Financial, Professional Services, Telecom, Banking, Real Estate, Government, Energy, Healthcare, and Education. Actively involved in projects on critical path, develop solutions, and conducting research.

Technical Experience

Director Data Science, ML, and AI **Jun 2020 — Present**
AgileThought *Tampa, FL*

- **Responsible for vision, strategy, execution, planning, and growth of the data science, machine learning, and artificial intelligence group. Achieved more than 200% in growth of the team. Developed, built, and executed all solutions and offerings.**
- Oversee the data science, ML, and AI activities at AgileThought. Responsible for data science, ML, and AI solutions and offerings. Head the vision and direction for the group and make sure team is given the proper training and best practices needed. Responsible for building out the team, which includes hiring, training, and budgeting.
- Oversee projects team composition, placement, budgeting, planning and cost. Oversee that technical requirements are met for each project.

Principal Data Scientist **Jun 2017 — Jun 2020**
AgileThought *Tampa, FL*

- **Led data science, machine learning, and artificial intelligence efforts for clients in retail, financial, professional services, telecom, banking, real estate, government, energy, healthcare, and education. From small and short projects to long and large multi $million projects.**
- Developed a document and content classifier for financial documents. Able to identify charts of account types, levels, sub-levels, totals, and named entities.
- Developed an AI in a Day workshop for Microsoft as part of being a top AI vendor. Demonstrating causality, machine learning classification, and evolutionary computing optimization capability in the Azure cloud.
- Developed predictive model for identifying quantity of colorways for line plan and class for sport equipment manufacturer.
- Developed a simulation and optimization of office occupancy for real estate. Optimization of floor plan layout and meeting schedule based on historical data and simulation.
- Developed OCR capability for client in financial industry. Used computer vision models used in super resolution to improve quality of scanned documents prior to process scans through OCR.
- Developed predictive and prescriptive capability for telecom companies to identify optimum layout of 5G towers.
- Developed NLP capability for contact centers to classify customer's comments in real time.
- Developed computer vision classifier to locate, identify and measure brain tumors T1 Weighted MRI images.
- Developed computer vision classifier to located, identify and measure electric equipment in transmission lines, measured from a drone.
- Developed multiple forecasting, classification, regression, clustering, reinforcement learning, and optimization models for clients in retail, financial, professional services, telecom, banking, real estate, government, energy, healthcare, and education services.

Research Scientist **Apr 2014 — May 2017**
Biodesix *Steamboat Springs, CO*

- **Developed molecular diagnostic tests that helps patients find the right treatment that works for them.**
- A cancer research company based out of Boulder, Colorado. Biodesix was 2015 fastest-growing private company according to Denver Business Journal. Developed molecular diagnostic tests that helps the patients find the treatment that works for them, personalized medicine. Tests based on serum/plasma samples acquired on Deep MALDI TOF mass spectrometer. The core of the classification tool is a deep learning network that is designed for tests based on deep data. The network is designed to be generalizable and optimized. Speech and pattern recognition algorithms are used in the network to recognize proteins instead of words. The network is mostly supervised learning but sometimes semi-supervised. Multiple levels of abstraction/representation are learned by machine learning algorithms that were inspired by brains. This can be viewed as meta-learning.
- Responsible for HPC system for the company as well as managed many R&D projects. HPC system administrator tasks include the installation of hardware as well as software monitoring, logging, and permission. Other tasks include but are not limited to statistical analysis such as regression-, correlation-, multivariate-, and survival analysis, ranking, clustering, and visualization.
- Prototyped algorithms are written in MATLAB and C/C++. Cancer research classifier development has many difficulties. Problems such as few samples and many features occur daily and there is high risk of over-fitting. Great tools, a deep understanding of the deep learning algorithm, and the experience was a recipe for successful test delivery.

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Aerospace Engineering **Jan 2011 — Apr 2014**
Siemens Wind R&D *Boulder, CO*

- **Developed blade generation tool that reduces R&D cycle time by weeks. Developed and performance tested key components of wind turbines.**
- Developed and started up professional software competency within the group. Established a personal and team software process that included Jira for scrum, project planning, and tracking. Mercurial and Git for code repository. Doxygen, Doxygraph, and Graphviz for documentation. Responsible for all blade surfaces and geometries of new and concept wind turbine blades. Blade surfaces that got handed over to manufacturing.
- Oversaw all CAD automation that uses CAD's core C/C++ API. Developed code on Windows and Linux even though the CAD did not support automation on LINUX. One of the applications was a core tool for blade development and production. It automatically generates blade surface models in the CAD. Which can be sent to manufacturing or to the Aero team for Computational Fluid Dynamics analysis (CFD). The tool is still being used today. The tool made a tremendous impact and enhanced repeatability and reduced cycle time by days and weeks.
- Responsible for performance testing of multiple components of a wind turbine blade, components such as airfoil sections, winglets, and vortex generators. A process that requires CAD geometry, meshing, and fluid dynamics simulation of its components. Oversaw and ran the local IT administration for windows, Linux, and HPC clusters. The HPC cluster was an essential component of the Wind R&D operation as it provided computing resources for the Computational Fluid Dynamics simulations, blade optimization, structural analysis, and system dynamics. Responsible for 3D printing operations which included field testable turbine components as well as scalable models. Algorithm development of multiple tools written in C/C++, FORTRAN, CUDA, and OpenCL.

Service Engineer **Mar 2008 — Jan 2011**
Siemens Energy *Orlando, FL*

- **Lead engineer for rewind of one of the largest generators in the world. Developed new methods and equipment that reduces rewinding time by days.**
- An energy entity of one of the largest conglomerates in the world. Led engineering support for generator projects that needed complete rewind, generators from one of the largest nuclear power plants in the world. Analyzed, engineered solutions, and made recommendations for any engineering-related changes or problems.
- Developed new methods and equipment that could reduce rewinding efforts by up to days. Supported field engineers by recommending a resolution to their problems and product change management (PCMs). Performed generator vibration analysis which is essential to prevent potential catastrophic failures to the generator. Led multiple research and development projects related to servicing turbine generators. Developed and wrote manuals for the engineering team. Performed readiness reviews and consulted power plant owners or operators.

Patents

Predictive test for melanoma patient benefit from pd-1 antibody drug and classifier development methods,
Biodesix WO2017011439A1, *Steamboat Springs, CO* 2017-01-19
Predictive test for melanoma patient benefit from antibody drug blocking lig- and activation of the T-cell programmed cell death 1 (PD-1) checkpoint protein and classifier development methods,
Biodesix US20170039345A1, *Steamboat Springs, CO* 2016-07-12
Bagged Filtering Method for Selection and Deselection of Features for Classification,
Biodesix US20160321561A1, *Steamboat Springs, CO* 2016-04-05
Trailing edge modifications for wind turbine airfoil,
Siemens EP2921697A1, *Boulder, CO* 2015-03-20
Vortex generators aligned with trailing edge features on wind turbine blade,
Siemens US9476406B2, *Boulder, CO* 2014-04-14
Rotor blade of a wind turbine,
Siemens US20150132141A1, *Boulder, CO* 2013-11-08
Reduced noise vortex generator for wind turbine blade,
Siemens US2015001040, *Boulder, CO* 2013-05-23
Slat with tip vortex modification appendage for wind turbine,
Siemens EP2647836A2, *Boulder, CO* 2013-02-11

Publications

A classifier development platform optimized for precision medicine test discovery | *J. Roder, et al.*, *PLOS Computational Biology* 2017

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A Pre-Treatment Mass Spectrometry-Based Serum Proteomic Test is Able to Stratify Patients with Ovarian Cancer Receiving Adjuvant Chemotherapy According to Overall and Disease-Free Survival and Identify Patients Likely to Exhibit Chemo-Resistance | *S. Kasimir-Bauer, T. Krivak, T. Herzog, H. Roder et al.*, *The Society of Gynecologic Oncology (SGO)* 2017

A mass spectrometry-based serum test to predict outcome of treatment with nivolumab: Analysis of samples taken during therapy | *J. Weber, H. Kluger, R. Halaban, et al.*, *Society for Biological Therapy of Cancer (SITC)* 2016

A mass spectrometry-based serum protein test for prognosis of patients with MDS | *Roder J, Loffler-Ragg J, Stauder R, et al.*, *American Association for Cancer Research (AACR)* 2015

Creating molecular diagnostic tests with supervised learning using time to event data | *H. Roder et al.*, *Rocky Mountain Bioinformatics Conference* 2015

Pre-treatment patient selection for nivolumab benefit based on serum mass spectra | *Weber J, Martinez AJ, Roder H, et al.*, *Journal for Immunotherapy of Cancer* 2015

Education

M.Sc Computer Science, *Stanford University* 2013 —

M.Sc Aerospace Engineer, *Embry-Riddle Aeronautical University* 2008 — 2013

Minor in Computer Science, *Embry-Riddle Aeronautical University* 2005 — 2008

Minor in Mathematics, *Embry-Riddle Aeronautical University* 2005 — 2008

B.Sc in Aerospace Engineering, *Embry-Riddle Aeronautical University* 2005 — 2008

Skills

Tools and Languages	Python, PySpark, Pytorch, Pandas, Javascript, CSS, ElasticSearch, SQL, Java, C/C++, Spacy, NLTK, CausalNex, DEAP, Detectron, Matlab, Anylogic, Pysim
Descriptive Analytics	regression-, correlation-, multivariate-, and survival analysis, ranking, clustering, and visualization
Diagnostic Analytics	Correlation analysis, Causality analysis, hypothesis testing, regression analysis
Predictive Analytics	Classification, forecasting, regression, prediction, clustering, graphical modeling, structure modeling
Prescriptive Analytics	Reinforcement learning, Causal inference, Optimization, Evolutionary Computing, Evolutionary Strategies
Area	NLP (text classification, NER, generation, conversational AI, OCR), Computer Vision (Image classification, object localization, object recognition, instance segmentation, keypoint detection), Forecasting, Recommender Systems