KRISTOPHER S. BROWN

+1 603 721 6541 ⋄ ksb@stanford.edu ⋄ https://web.stanford.edu/∼ksb/

OBJECTIVE

I work daily with distributed high-performance computing, applied mathematics, database engineering, and data analytics infrastructure. My PhD addresses systemic challenges with data sharing, transparency of methodologies, and automation in computational science.

EXPERIENCE

Software Engineering Intern Summer 2019 - Present
Google

- Explored applications of feature learning, feature selection, and network pruning / quantization algorithms, in the context of specialized hardware for next-generation ML.
- Contributed to statistics infrastructure towards the analysis of data from higher-order logic automated theorem proving deep learning models.

CTO, Database Engineer Spring 2018 - Present
Modelyst Technologies

- Designed tools for automation of distributed computing and heterogeneous data integration to accelerate corporate research in the computational sciences.
- Developed tools for scientists modeling complicated phenomena to generate relational databases from a natural declaration of scientific facts and to naturally query and publicly communicate their knowledge base.

Graduate Research Assistant Winter 2016 - Present
Stanford University, Nørskov Group

- Built models for chemical systems that adapt recent advances in machine learning (e.g. graph-convolutional and message-passing networks) to interface with chemistry data
- Applied graph-theoretic techniques to give high-level structure to simulation data in order to model complex phenomena at electrochemical interfaces

EDUCATION

PhD in Chemical Engineering 2020 (expected)
Stanford University

Bachelor of Engineering in Chemical Engineering 2015
Bachelor of Science in Chemistry 2014
Dartmouth College, *Magna cum laude*

Honors

Comput. Mat. Sci. Editor's Choice: Categorical data integration for computational science 2019
Applied Category Theory: Bridging Theory & Practice at NIST (invited guest) 2018
CS230 Deep Learning: 1st Prize Poster Award (Stanford University) 2018
National Defense Science and Engineering Graduate (NDSEG) Fellowship 2017 - Present
American Chemical Society National Scholar 2012 - 2014

SKILLS AND INTERESTS

Programming Languages	Python, SQL (Expert), Haskell, Prolog, R (Intermediate), Java (Beginner)
Spoken Languages	Spanish, German, French (intermediate level)
Extracurricular Activities	Tau Beta Pi, Dartmouth Undergraduate Journal of Science (Writer), Dartmouth Quizbowl, Concert piano and music composition