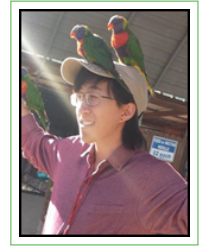


Hugh Chen

Curriculum Vitae

✉ hugh.chen1@gmail.com

📄 hughchen.github.io



Education

- 2018–**** **PhD in Computer Science**, *University of Washington*, Seattle, WA, GPA 3.72.
- 2016–2018 **MS in Statistics**, *University of Washington*, Seattle, WA, GPA 3.77.
- 2012–2016 **BA in Computer Science**, *UC Berkeley*, Berkeley, CA, GPA 3.85.

Honors and Awards

- 2017–2022 **Recipient of NSF Graduate Research Fellowship**.
- 2017–2017 **Travel Award**, *NIPS Machine Learning for Health Workshop*.
- 2016–2016 **High Distinction in General Scholarship**, *University of California, Berkeley*.
- 2015–2016 **EECS Honors Program**, *University of California, Berkeley*.
- 2014–2016 **President of CS Honors Society (UPE)**, *University of California, Berkeley*.

Research Projects

- 2017 **Anesthesiologist-level forecasting of hypoxemia with only SpO2 data using deep learning**, *Gabriel Erion, Hugh Chen, Scott Lundberg and Su-In Lee*. *NIPS ML4H*. [Paper](#).
- 2017 **Hybrid Gradient Boosting Trees and Neural Networks for Forecasting Operating Room Data**, *Hugh Chen, Scott Lundberg, Su-In Lee*. *NIPS ML4H*. [Paper](#).
- 2017 **Checkpoint Ensembles: Ensemble Methods from a Single Training Process**, *Hugh Chen, Scott Lundberg, Su-In Lee*. *ArXiv*. [Paper](#).
- 2016 **Probabilistic Model-Based Approach for Heart Beat Detection**, *Hugh Chen, Yusuf B. Erol, Eric Shen, Stuart Russell*. *Physiological Measurement*, Vol. 37, No. 9, August 2016. [Paper](#) [Code](#).

Experience

Research

- 2016–201* **Research Assistant**, *University of Washington*, Dr. Su-In Lee.
Two primary research directions: machine learning for operating room data involving transfer/representation learning and interpretable machine learning (feature attributions).
- 2015–2016 **Research Assistant**, *University of California, Berkeley*, Dr. Stuart Russell.
Worked on probabilistic modeling techniques (dynamic bayesian network) and state estimation (particle filter, Rao-Blackwellized particle filter) for health applications.
- 2013–2013 **Research Assistant**, *University of Arizona*, Tucson, AZ, Dr. Hsinchun Chen.
Worked on parsing international hacker forums for cybersecurity applications.

Teaching

- 2015–2015 **Student Instructor**, *Discrete Math and Probability*, Dr. Umesh Vazirani.
Taught two weekly one hour discussion sections, generated hw/exam problems, graded exams, and held office hours.
- 2013–2013 **Reader**, *Structure and Interpretation of Computer Programs (Self-Paced)*.
Led lab sections, graded labs, homework, exams, and helped develop the course.

Industry

- 2014–2014 **Software Engineering Intern**, *Location Labs*, Emeryville, CA.
Backend development (Restful Web API) as well as web development.

Side Projects

- 2017 **Implementation of Stochastic Gradient Descent Variants**, *Hugh Chen*.
- 2017 **Implementation of Nonparametric (neural networks, KNNs, and decision trees) Methods**, *Hugh Chen*.
- 2016 **MAX-SAT Algorithms Survey**, *Hugh Chen, Yiwen Song*.

Languages

- Expert **Python, C, C++, Java, Julia, R, Matlab, Git, and Latex.**
- Intermediate **Scheme, HTML, CSS, MIPS.**

Coursework

2016–201* **Master of Science**, *University of Washington*, Seattle, WA.

Graduate Level:

- Statistical Inference (Michael Perlman)
- Design and Analysis of Experiments (Mathias Drton)
- Applied Regression (Elena Erosheva)
- Statistical Computing (Adrian Dobra)
- Statistical Genetics I: Mendelian Traits (Sharon Browning)
- Nonparametric Regression and Classification (Mathias Drton)
- Statistical Learning: Modeling, Prediction, and Computing (Fang Han)
- Advanced Regression Methods for Independent Data (Jon Wakefield)
- Analysis of Categorical and Count Data (Adrian Dobra)

2012–2016 **Bachelor of Arts**, *University of California, Berkeley*, Berkeley, CA.

Graduate Level:

- Combinatorial Algorithms and Data Structures (Christos Papadimitriou)

Undergraduate Level:

- Structure and Interpretation of Computer Programs (Brian Harvey)
- Data Structures (Jonathan Shewchuk)
- Great Ideas in Computer Architecture (Randy Katz)
- Discrete Mathematics and Probability Theory (Umesh Vazirani)
- Introduction to Artificial Intelligence (Pieter Abbeel)
- Introduction to the Internet: Architecture and Protocols (Sylvia Ratnasamy)
- Efficient Algorithms and Intractable Problems (David Wagner)
- Introduction to Microelectronic Circuits (Michel Maharbiz)
- Combinatorics and Discrete Probability (Michael Jordan)
- Introduction to Machine Learning (Peter Bartlett, Alexei Efros)
- Operating Systems and Systems Programming (John Kubiawicz)
- Structure and Interpretation of Signals and Systems (Babak Ayazifar)
- Foundations of Computer Graphics (Ren Ng)