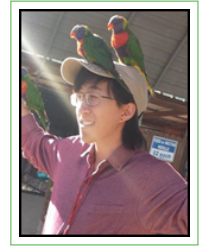


# Hugh Chen

## Curriculum Vitae

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📁 [hughchen.github.io](https://hughchen.github.io)



### Education

- 2018–\*\*\*\* **PhD in Computer Science**, *University of Washington*, Seattle, WA, GPA 3.79.
- 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

- 2019 **Explaining Models by Propagating Shapley Values of Local Components**, Chen, Hugh, Scott Lundberg, and Su-In Lee. *arXiv preprint arXiv:1911.11888*.
- 2019 **Explainable AI for Trees: From Local Explanations to Global Understanding**, Scott Lundberg, Gabriel Erion, Hugh Chen, Alex DeGrave, Jordan M. Prutkin, Bala Nair, Ronit Katz, Jonathan Himmelfarb, Nisha Bansal and Su-In Lee. *Nature Machine Intelligence 2019 (Minor Revision)*.
- 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*.
- 2017 **Hybrid Gradient Boosting Trees and Neural Networks for Forecasting Operating Room Data**, Hugh Chen, Scott Lundberg, Su-In Lee. *NIPS ML4H*.
- 2017 **Checkpoint Ensembles: Ensemble Methods from a Single Training Process**, Hugh Chen, Scott Lundberg, Su-In Lee. *arXiv preprint arXiv:1710.03282*.
- 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 [Code](#).

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## 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.

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## 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*.

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## Languages

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