

# DAVID GRIMSMAN

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## WORK HISTORY

### RESEARCHER/TEACHING ASSISTANT, UC SANTA BARBARA

Santa Barbara, CA  
September 2016 – Present

### DIRECTOR OF PRODUCT DEVELOPMENT, ACHILLES HEEL TECHNOLOGIES

Orem, UT (remotely)  
January 2018 – Present

### RESEARCHER/TEACHING ASSISTANT, BRIGHAM YOUNG UNIVERSITY

Provo, UT  
January 2014 – Present

### DATA SCIENTIST, APPLIED INVENTION

Orem, UT (remotely) & Boston, MA  
March 2015 – August 2019

### SUMMER INTERN, MIT LINCOLN LABORATORY

Lexington, MA  
June 2015 – August 2015

### IT MANAGER, BRAINSTORM, INC

American Fork, UT  
January 2010 – December 2013

## ACADEMIC RESEARCH

### Value of information in multiagent systems

- Proved performance guarantees as agents' communication network changes
- Showed that strategic info exchange increases performance
- Explored how performance is affected by parallel computation
- Described precisely how performance can improve with increased info exchange

### Network security as a game

- Modeled network security against "crossfire attacks" as a game between router and attacker
- Showed the value to the router of knowing the precise value of attacker's budget
- Described router/attacker optimal policies

### Schedule optimization for batch flow shops

- Designed a scheduling method that leverages data from 3 different levels of control
- Collaborated with an interdisciplinary team as the computer science liaison
- Created a novel algorithm and showed improved performance guarantees

## PROFESSIONAL RESEARCH

|  |  |
|--|--|
| The stock market as an indicator for internet health | Led a team in exploring how stock market data could be used to infer internet outages        |
|  | Contributed to a larger project to monitor internet health worldwide                         |
| Setting prices                                       | Contributed to an algorithm to help a Fortune 500 company set prices in a competitive market |
|  | Algorithm was implemented and used, showing an increase in revenue                           |
| Modeling atmospheric phenomenon                      | Created a MATLAB model to show how phenomenon affects certain types of optical signals       |
|  | Model is used today for field testing sites  |
| Agricultural system identification                   | Created an algorithm in Python to infer soil parameters based on observations                |
|  | Method has been implemented in agricultural software across the US                           |

### UC SANTA BARBARA

**PhD in Electrical Engineering**, expected graduation January 2021

Recipient of National Science Foundation IGERT Fellowship for Network Science

Remainder of funding by Office of Naval Research

## EDUCATION

### BRIGHAM YOUNG UNIVERSITY

**MS in Computer Science**, April 2016

Funded by Department of Homeland Security

### BRIGHAM YOUNG UNIVERSITY

**BS in Electrical Engineering**, April 2006

Recipient of the four-year, full-tuition Heritage Scholarship

## SKILLS AND ACCOMPLISHMENTS

### SOFTWARE

- Experience coding in:
  - Python
  - MATLAB
  - C++, C#
  - R
- Have used the following in research:
  - Neural networks
  - Clustering algorithms
  - Reinforcement learning

### ACADEMIC PRESENTING

- UCSB Grad Slam Semifinalist (2018)
- BYU CS 3-Minute Thesis Winner
- BYU Spring Research Conference Session Award Winner (2015, 2016)

### PROFESSIONAL PRESENTING/TRAINING

- Was a key member of the team that pioneered the Customer Immersion Experience (CIE), a sales program that Microsoft implements for its top customers. This program affected \$1 billion of revenue in 2011.
- Effectively coached internal Microsoft sales staff and partners domestically and internationally on the CIE, influencing Microsoft's worldwide sales revenue.
- Innovatively and independently redesigned the training curriculum used by all BrainStorm trainers to be scenario-focused, setting the company apart from competitors.

## REFERE NCES

### **JASON MARDEN**

Associate Professor, Electrical & Computer Engineering, UC Santa Barbara  
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### **SEAN WARNICK**

Associate Professor, Computer Science, Brigham Young University  
Managing Partner, Achilles Heel Technologies  
801-422-6463, sean@cs.byu.edu

### **JOÃO HESPANHA**

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