Peter B. Winter, Ph.D.

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OBJECTIVE

- Data analysis & visualization expert
- Specialized in communicating results to non-technical audience
- Looking for team-oriented environment to answer complex questions

EXPERIENCE

DATA SCIENTIST & COMPUTATIONAL RESEARCHER
Northwestern University | Evanston, IL. | 2008 - Present

Meaningful Health Metrics
- Developed machine-learning tool to extract the most descriptive health metrics from the movement of 1,000+ micro-organisms
- Team lead (6 people). Collaborated with biologists, computational researchers, software developers

High-Throughput Analysis of Video Data
- Automated infrastructure to process 10+ TB of movement and behavior data from video footage of micro-organisms
- Team Lead (4 people). Collaborated across an experimental biological lab and a computational complex-systems lab
- Published paper & software for identifying individual animals in a crowd

Teaching & Mentourship
- Bootcamp instructor | Big Data Initiative | 2014 & 2015
- TA and Lecturer | Intro to Computational Research | 2011
- Mentor | 6+ Graduate & Undergraduate Students | 2010 - Present

HONORS & AWARDS

- National Research and Service Award (NRSA) Fellowship   2013 – 2015
- Mechanisms of Aging and Dementia Fellowship   2011 – 2013
- Predictive Science and Engineering Design Fellowship   2010 – 2011

EDUCATION & TRAINING

POST DOCTORAL FELLOW
Northwestern University | Evanston, IL. | Jan 2016 - Present

DOCTOR OF PHILOSOPHY
Northwestern University | Evanston, IL.
Chemical & Biological Engineering | Dec 2015
- **Thesis:** Quantifying Complex Behavioral Phenotypes in *C. elegans*
- co-founded colloquium for graduate students to practice oral communication.

BACHELORS OF ENGINEERING
McGill University | Montreal, Quebec
Chemical Engineering | May 2008

OTHER

- Native fluency in English | Fluency in German
- Enjoy strategic board games | Learning math | Optimizing habits

SKILLS

DATA ANALYSIS & VISUALIZATION

Techniques
- time-series analysis
- image processing
- model selection
- feature design
- feature selection
- machine learning

Tools
- matplotlib | 8+ years
- numpy | 6+ years
- pandas | 3+ years
- seaborn | 3+ years
- scikit-learn | 2+ years

SOFTWARE DEVELOPMENT

- python | 8+ years
- bash & unix tools | 8+ years
- git & mercurial | 7+ years

Performance optimization
- cprofiler
- runsnake

High-throughput data formats
- NoSQL
- MongoDB
- HDF5

High-throughput computing
- torque
- map-reduce

CLEAR COMMUNICATION

Presentations
- presentations | 100+
- scientific conferences | 15
- public outreach | 5
- guest lectures | 2

Writing
- research papers | 3.5
- blog posts | 9
- internal reports | 50+
- grant applications | 7+

Collaboration
- self-motivated
- enthusiastic
- constructive feedback
- conflict mediation