KARLA FETTICH, PHD

I am enthusiastic about using my skills, expertise and time to make a lasting positive impact in the community. Professionally, my work seeks to improve healthcare for aging individuals, and has earned an Excellence in Technology Award for Dignity in Long-Term Care[1]. Personally, I coordinate efforts to increase diversity in the Philadelphia data science community[2], reduce the number of homeless animals in the city[3] and facilitate care and recovery for those experiencing opioid addiction[4].

CONTACT

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- 🐦 kfettich
- ⌨ github.com/kfettich

I speak several languages including German (native), Romanian (native), French (basic) and Spanish (basic).

SKILLS

Skill
R
RMarkdown
SPSS
Shiny Dashboards
Python
NoSQL
SQL
Jupyter Notebooks

🎓 EDUCATION

2016 — 2011

PhD, Brain and Cognitive Science
Temple University 📍 Philadelphia, PA

- Neuroscience Specialization
- Dissertation: Coordinated neuromorphology in the development of social information processing[5]
- Participated in the American Psychological Association's Advanced Training Institute on Exploratory Data Mining in Behavioral Research (2013) and University of Michigan's Training Course in fMRI (2014)

2009 — 2008

MA, Social Sciences/Psychology
The University of Chicago 📍 Chicago, IL

- Thesis: Predictors of Suicidality: Experiences of weight-related stigma in candidates for bariatric surgery[6]

2005 — 2002

BA, Psychology
Jacobs University Bremen 📍 Bremen, Germany

💼 INDUSTRY EXPERIENCE

present — 2015

Head of Algorithm Development
Orchestrall, Inc. 📍 Conshohocken, PA

- Develop algorithms to power intelligent applications that address health care needs for elderly individuals, including prediction of toileting need to prevent incontinence, anomaly detection and performance tracking to improve data collection
- Conduct end-to-end analyses including requirements specification, data collection, identification of external datasets, data processing, analysis, ongoing deliverables, and presentations
- Implement analytical models into production through collaborations with the software development team
- Build and prototype analysis pipelines iteratively, integrating feedback from business and development management, to provide insights at scale
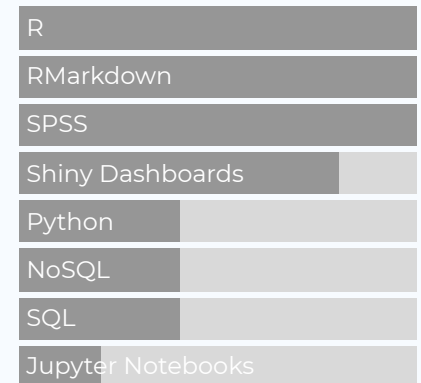
🧳 RESEARCH EXPERIENCE

2016
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2014

Graduate Research Assistant
Neurocognition Lab
📍 Temple University

- Introduced and applied machine learning techniques (e.g. support vector machines, multivoxel pattern analysis, graph theory, network analysis) and high performance computing tools to advance neuroimaging research
- Assessed new data sources for value creation, attracting new research opportunities through a large, multi-site research network
- Evaluated and communicated technical advantages and tradeoffs between statistical models
- Solved difficult, non-routine analysis problems using large, complex data sets, and applied advanced analytical methods as needed
- Provided guidance with data analysis and coding to research assistants

2013
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2011

Graduate Clinical Research Assistant
Mechanisms of Affect Dysregulation Lab
📍 Temple University

- Supported and executed a wide range of clinical psychology studies including survey research, clinical treatment trials, neuroimaging studies, and secondary data research
- Designed and conducted a neuroimaging research study assessing affective risk factors in clinical populations
- Collaborated with the research coordinator, graduate and undergraduate students, as well as researchers from other sites to deliver high-quality peer-reviewed publications and academic conference presentations

2011
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2009

Lead Clinical Research Coordinator
Adult Eating and Weight Disorders Clinic
📍 The University of Chicago

- Planned and conducted statistical analyses of cross-sectional, time series, epidemiological, health outcomes and clinical data
- Optimized clinical participant recruitment and retention through data analytics
- Coordinated recruitment, screening, intake, assessment, treatment and follow-up stages several research projects, including a large NIMH-funded clinical trial and pilot studies using psychophysiological data (fMRI, RSA)
- Contributed to manuscript preparation for peer-reviewed publications and gave conference presentations

🖥 TEACHING EXPERIENCE

2014

Graduate Teaching Assistant and Lab Instructor
Statistics
📍 Temple University

- Taught weekly introductory statistics lab sections (75 undergraduate students) with positive student feedback
- Provided one-on-one tutoring and exam preparation on an as-needed basis
- Administered and corrected exams and liaised between students and the course instructor

I have extensive experience with academic research, including clinical trials and studies using neuroimaging and psychophysiological data.

📈 COMMUNITY DATA PROJECTS

present | 2020

Partner Organization Liaison

PAWS Animal Returns & Clinic No-Shows 📍 R-Ladies Philadelphia

- Work with the Philadelphia Animal Welfare Society's Director of Operations to understand their needs and translate them into relevant analytics projects
- Collaborate with project leader and team members and provide input on analyses and interpretations
- Conduct ad-hoc analyes and data exploration

present | 2019

Project Leader

PAWS Data Pipeline with Code for Philly 📍 Code for Philly

- Work closely with project management team, peer data scientists, engineers, developers and Philadelphia Animal Welfare Society representatives to build a data lake
- Oversee team efforts in data processing, cleansing, and verifying data integrity

2020

Organizer

Opioid Epidemic Data Science Collaboration

📍 R-Ladies Philadelphia, Code for Philly

- Collaborated with organizing team to develop vision, strategy and infrastructure for hackathon, and ensure successful event planning
- Identify relevant data sources and preprocess data provided by partner organizations
- Oversee teams and ensure that they are on track for the project deadlines

2019 | 2018

Datathon Project Leader

2018 Volunteer Engagement and 2019 Animal Adoptions

📍 R-Ladies Philadelphia

- Consulted with Philadelphia Animal Welfare Society representatives to articulate business questions and translate them into viable analytics projects for volunteer data scientists
- Designed hackathon and managed the end-to-end process, from initial discussions with PAWS, recruitment of volunteers, ongoing monitoring and coordination of work, and final report editing and completion
- Ensured that statistically-derived insights were translated into clear and actionable business recommendations

📓 SELECTED PUBLICATIONS

2019

The interactive effects of peers and alcohol on functional brain connectivity in young adults[7]

NeuroImage

2017

At risk of being risky: The relationship between "brain age" under emotional states and risk preference[8]

Developmental Cognitive Neuroscience

I enjoy learning via hands-on projects that have a real and positive impact, and I seek to create opportunities to make this type of learning available to the wider community.

2016	**Amygdala hyperactivation to angry faces in intermittent explosive disorder**[9]
	Journal of Psychiatric Research
2014	**Emotion regulation deficits in intermittent explosive disorder**[10]
	Aggressive Behavior
2013	**Loneliness mediates the relationship between emotion dysregulation and bulimia nervosa/binge eating disorder psychopathology in a clinical sample**[11]
	Eating and Weight Disorders
2012	**Coping With Obesity Stigma Affects Depressed Mood in African-American and White Candidates for Bariatric Surgery**[12]
	Obesity
2012	**Correlates of Suicidal Ideation and/or Behavior in Bariatric–Surgery–Seeking Individuals With Severe Obesity**[13]
	Crisis
2012	**Factors Associated with Suicide Ideation in Severely Obese Bariatric Surgery-Seeking Individuals**[14]
	Suicide and Life-Threatening Behavior

☏ VOLUNTEER WORK

Organizer

R-Ladies Philadelphia

📍 Philadelphia, PA

present | 2018

- Collaborate with a team of 5 other organizers to increase gender diversity in the data science community in Philadelphia
- Create learning, networking and leadership opportunities for over 800 members via monthly meetups focused on R and collaborations with other data groups in the city

Executive Committee Member, Membership Lead

Young Friends of Philadelphia Animal Welfare Society

📍 Philadelphia, PA

present | 2019

- Work with the executive leadership team and the Board of the Philadelphia Animal Welfare Society to create and grow a group that engages young professionals in the animal welfare efforts of PAWS
- Oversee membership engagement, define and monitor success metrics using analytics

Volunteer, Mentor

Philadelphia Animal Welfare Society (PAWS)

📍 Philadelphia, PA

present | 2016

- Help with dog care and train new volunteers on all aspects of dog care volunteer shifts

🔗 LINKS

1: https://www.mcknights.com/news/dunwoody-named-dignity-gold-award-winner/

2: https://www.meetup.com/rladies-philly/

3: https://github.com/rladiesPHL/2019_datathon/

4: https://github.com/CodeForPhilly/datahack2020

5: https://github.com/kfettich/cv/raw/master/FettichKarla_Dissertation.pdf

6: https://github.com/kfettich/cv/raw/master/FettichKarla_MAThesis.pdf

7: https://doi.org/10.1016/j.neuroimage.2019.04.003

8: https://doi.org/10.1016/j.dcn.2017.01.010

9: https://doi.org/10.1016/j.jpsychires.2016.04.006

10: https://doi.org/10.1002/ab.21566

11: https://doi.org/10.1007%2Fs40519-013-0083-2

12: https://doi.org/10.1038/oby.2012.12

13: https://doi.org/10.1027/0227-5910/a000115

14: https://doi.org/10.1111/j.1943-278X.2012.00110.x