

# KARLA FETTICH, PHD

I am enthusiastic about using my skills, expertise and 10+ years of healthcare analytics experience to make a lasting positive impact in the community. Professionally, I develop analytics and machine-learning approaches to improve health care solutions. Personally, I serve as a volunteer leader of efforts to [increase diversity in the Philadelphia data science community](#) and provide analytics insights to non-profit organizations in the greater Philadelphia area through [datathons](#) and [software product development](#).

[Download a PDF of this CV](#)

## CONTACT

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🐙 [github.com/kfettich](https://github.com/kfettich)

## EDUCATION

present   2021	<b>Certifications</b>	📍 Online
	• Professional, Health Insurance Advanced Studies (PHIAS) (AHIP, 2021)	
2016   2011	<b>PhD, Psychology Neuroscience</b> Temple University	📍 Philadelphia, PA
2009   2008	<b>MA, Social Sciences (Psychology)</b> The University of Chicago	📍 Chicago, IL
2005   2002	<b>BA, Psychology</b> Jacobs University Bremen	📍 Bremen, Germany

## HEALTHCARE ANALYTICS EXPERIENCE

present   2021	<b>Senior Data Scientist</b> AmeriHealth Caritas	📍 Newtown Square, PA
	<ul style="list-style-type: none"><li>• Developed machine learning models in R for risk stratification of CHC members, including both modifiable and non-modifiable risk factors</li><li>• Conducted exploratory data mining analyses, created insights decks and presentations to internal clients, and led a collaborative analytics project</li><li>• Improved analytics efficiency by reducing meeting overhead, automating workflows, developing solutions to move away from legacy systems, and coordinating with other teams to facilitate access to needed tools</li><li>• Led knowledge-sharing sessions on modern tools in data science for colleagues across multiple teams</li></ul>	

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

## TECHNICAL SKILLS

R	
Shiny Dashboards	
SQL, NoSQL	
MS Office (Excel, PPT, etc.)	
Azure (Synapse, ML Studio)	
Python	
Jupyter Notebooks	
PowerBI	
Tableau	
SAS, SPSS	

2021  
|  
2015

● **Head of Analytics & Algorithm Development**

Orchestrall, Inc.

📍 Conshohocken, PA

- Lead healthcare data science consulting projects to derive insights from clinical data and multidisciplinary teams
- Develop and test predictive models for operational implementation
- Select optimal tools for statistical modeling, including decision trees, logistic regression, conditional inference forests, multiple imputation
- Develop algorithms to power intelligent healthcare applications for the senior care market, including outcome prediction, anomaly detection, and logistics optimization; our solution earned the [Excellence in Technology Award for Dignity in Long-Term Care](#)
- Conduct end-to-end analyses including study design, data identification/collection, ETL, analysis, and communication of findings
- Implement analytical models into production through collaborations with the software development team

2016  
|  
2013

● **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
- 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

2013  
|  
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  
|  
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

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



## LEADERSHIP

present  
|  
2019

- **Project Leader**  
PAWS Data Pipeline 📍 Philadelphia, PA
  - Lead a team to create a [360-degree view of PAWS' constituents](#) to help development and operations
  - 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

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.

present  
|  
2018

- **Organizer & Board Member**  
R-Ladies Philadelphia 📍 Philadelphia, PA
  - Work to increase gender diversity in the data science community in Philadelphia
  - Create learning, networking and leadership opportunities for over 1500 members via monthly meetups focused on R and collaborations with other data groups in the city

present  
|  
2018

- **Lead Datathon Organizer**  
Collaborate with non-profit organizations to articulate business questions, translate them into viable analytics projects for volunteer data scientists; coordinate the volunteer effort, and help data scientists translate their findings into clear and actionable business insights  
📍 Philadelphia, PA
  - Philadelphia Animal Welfare Society: [Animal Shelter Volunteer Engagement \(2018\)](#) and [Animal Adoptions \(2019\)](#)
  - Health Federation of Philadelphia, Prevention Point, the City of Philadelphia: [Opioid Epidemic \(2020\)](#)
  - Judge Accountability Table: [Judicial patterns in Philadelphia courts \(2021\)](#)



## TEACHING

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



## CONTINUING EDUCATION



### Microsoft Azure

- DP-900T00: Microsoft Azure Data Fundamentals Program (2021)
- Predictive Modeling (2021), [Machine Learning Pipelines](#), [Deep Learning Inference](#), Build Random Forests in R with ML Studio (2021)



### Data & Analytics

- [Inferring Causal Effects from Observational Data](#) (2021)
- Advanced Training Institute on Exploratory Data Mining in Behavioral Research (2013)



### Project Management

- [Structuring Machine Learning Projects](#) (2021)



## VOLUNTEER WORK

present  
|  
2016



### Volunteer, Mentor

[Philadelphia Animal Welfare Society \(PAWS\)](#)

📍 Philadelphia, PA

present  
|  
2018



### Organizer & Board Member

[R-Ladies Philadelphia](#)

📍 Philadelphia, PA

present  
|  
2019



### Project Leader

[Code for Philly](#)

📍 Philadelphia, PA



## PAPERS & PUBLICATIONS

2019



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

2017



[At risk of being risky: The relationship between “brain age” under emotional states and risk preference](#)

2016



[Dissertation: Coordinated neuromorphology in the development of social information processing](#)

2016



[Amygdala hyperactivation to angry faces in intermittent explosive disorder](#)

- 2014 ● Emotion regulation deficits in intermittent explosive disorder
- 2013 ● Loneliness mediates the relationship between emotion dysregulation and bulimia nervosa/binge eating disorder psychopathology in a clinical sample
- 2012 ● Coping With Obesity Stigma Affects Depressed Mood in African-American and White Candidates for Bariatric Surgery
- 2012 ● Correlates of Suicidal Ideation and/or Behavior in Bariatric-Surgery-Seeking Individuals With Severe Obesity
- 2012 ● Factors Associated with Suicide Ideation in Severely Obese Bariatric Surgery-Seeking Individuals
- 2009 ● MA Thesis: Predictors of Suicidality: Experiences of weight-related stigma in candidates for bariatric surgery