

James Regis Eles, Ph. D.

PROFESSIONAL PROFILE

Data scientist with 10 years of experience in data analytics, statistical analysis, and experimental design. Currently developing natural language processing pipelines in Python to identify networks of individuals. Formerly Post-doctoral associate and graduate student in Biomedical Engineering. Passionate about leveraging big data to make human insights.

CORE SKILLS

Data science: Python (2 years), machine learning / neural networks (Scikit-Learn, Tensorflow), predictive analytics, natural-language processing, data mining, data scraping, SQL, PySpark, hypothesis testing, experimental design

Analytical/Numerical Methods: Linear algebra, differential equations, signal processing, frequentist statistics

Communication: Wrote and generated data visualizations for 14 peer-reviewed publications (*h*-index: 11). Presented 14 podium or poster presentations. Grand prize winner in 4 commercialization and consulting pitch competitions.

DATA SCIENCE EXPERIENCE

NNData Corp.

Data Scientist

Washington, DC

September 2019 – Present

- Developed and integrated **Python** natural language processing pipelines into flagship software with Flask
- Worked in a team with GitHub to develop **data mining** approaches to identify networks of individuals in text
- Built **neural-networks** for relationship extraction to **predict** entity hierarchies with state of the art performance

The Data Incubator

Fellow

Washington, DC

June 2019 – August 2019

- Generated a capstone project to predict traffic intersection car accidents with 200MB of data from 5 datasets
- Completed projects in machine learning, predictive modeling, natural language processing, PySpark, and SQL

University of Pittsburgh, Department of Bioengineering

Post-Doctoral Associate

Pittsburgh, PA

September 2018 – June 2019

- Innovated **signal analysis algorithms** and **pipelines** in **Matlab** for over **1 TB of 3D time-series imaging data**.
- **Designed experiments** to **test hypotheses** for novel neural stimulation therapies **resulting in 4 publications**
- Mentored 5 graduate students and laboratory technicians and teaching imaging and programming techniques
- Chaired Gordon Research Seminar for Neuroelectronic Interfaces 2020 (Postponed due to COVID-19)

Graduate Student

August 2012 – September 2018

- **Led experimental design** and **statistical approaches** to assess the biocompatibility of novel medical implants
- Applied **principle component analysis** and **k-means clustering** to identify and track brain regions after damage
- Teaching assistant for 3 courses (80 students), lecturer for 8 classes | 11 journal articles | 12 presentations

RESEARCH, PROJECT MANAGEMENT, AND COMMERCIALIZATION EXPERIENCE

University of Pittsburgh, sciVelo -- *Jr. Commercial Translation Associate*

October 2016 – November 2018

- **Built commercialization strategies** for bioinformatics technologies created by 12 teams of university researchers
- Synthesized grants and pitches to secure \$325,000 in support for teams and resulting in two spin-out companies

InterPhase Materials -- *Collaborating Project Manager*

January 2015 – February 2018

- **Designed and managed pre-clinical** testing on dental implant technology; co-inventor on US Patent 10,385,082
- Generated grant applications and pitches **resulting in \$160,000 of non-dilutive funding**

EDUCATION

University of Pittsburgh | Ph. D. in Bioengineering (2019) | 12 publications, Awarded >\$160k in grants

University of Rochester | B.S. in Neuroscience (2012) | *Cum laude*, Phi Beta Kappa inductee, Dean's Scholarship