

# Leah Scherschel

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Data Scientist specializing in analytics and visualization, with a background in biology and the pharmaceutical industry and an interest in machine learning.

## EXPERIENCE

### **Cyberinfrastructure for Network Science Center, Bloomington, IN— Research Assistant**

AUGUST 2020 - PRESENT

- Aiding the Human BioMolecular Atlas Program (HuBMAP) team at Indiana University in creating an atlas of the human body at the cellular level.
- Supporting implementation of human organ microscopy segmentation via machine learning algorithms.

### **Catalent Pharma Solutions, Bloomington, IN — QC Microbiology Associate Scientist**

DECEMBER 2014 - NOVEMBER 2018

- Provided environmental monitoring for cGMP clean rooms.
- Performed routine testing in QC Microbiology/Chemistry laboratory setting.
- Investigated deviations from standard operating procedures (SOPs) and out of specification test results.
- Trained new personnel on best laboratory practices and SOPs.

### **Vocal and Communicative Development Laboratory, Bloomington, IN — Laboratory Manager**

MAY 2013 - SEPTEMBER 2013

- Managed the daily research activities of the laboratory.
- Led a group of six undergraduate research assistants.
- Functioned as liaison between assistants and primary investigators (PIs).
- Helped develop complex behavioral research SOPs.

### **Animal Behavior Farm, Bloomington, IN— Research Assistant**

AUGUST 2009 - MAY 2013

- Recorded observational data on avian subjects.
- Analyzed and interpreted social interaction data.
- Collaborated on “Social niches and sex assortment: uncovering the developmental ecology of brown-headed cowbirds, *Molotrus ater*”, published in Animal Behavior (<https://doi.org/10.1016/j.anbehav.2011.07.035>).

## EDUCATION

### **Indiana University, Bloomington, IN— Master of Science, Data Science**

JANUARY 2018 - JULY 2020

- Graduate Level GPA: 3.957
- Capstone project completed with faculty mentor Katy Börner.

### **Indiana University, Bloomington, IN— Bachelor of Arts, Biology**

AUGUST 2009 - MAY 2013

- Animal Behavior Area Certificate
- Biology Departmental Honors
- Graduated with High Distinction
- Cox Research Scholar

## PROJECTS

### **“Visualizations for Glomeruli Detection Algorithm Assessment” — Master’s Capstone Project**

Developed visualizations for assessing training data, structure within a high-dimensional dataset, and false positives predicted by object detection convolutional neural networks.

### **“Visualizing IU’s multidisciplinary network of researchers tackling the Prepared for Environmental Change Grand Challenge” — Data Visualization Client Project**

Collaborated with a team of peers to develop visualizations, including a word cloud generated by an R script that utilized the ggplot2 package and an interactive network graph, that fulfilled the client’s insight needs.

## SKILLS

**Programming Languages** - Python, R, Scala

**Statistical Analysis Tools** - R, Excel

**Visualization Tools** - ggplot2 (R), matplotlib (Python), Tableau, Gephi, Adobe Creative Suite

**Databases** - SQL/noSQL, including MongoDB and Neo4j

**Big Data Management and Use** - Data pipeline development, distributed file systems/computing

**Machine Learning Techniques** - k-means clustering, object detection, convolutional neural networks

**cGMP Documentation**