

SUMMARY

Experienced data scientist with a passion for using practical approaches with machine learning, statistics, and experimentation to solve and prevent business and client problems. Life-long learner excited by challenges and driven by curiosity to measure the unmeasurable. Storyteller translating complex concepts into clear and accessible terms and bringing data to life through visualizations.

PROFESSIONAL EXPERIENCE

[Cequence Security, Sunnyvale, CA, USA](#)

Jan 2019 - Present

Data Scientist

- Increased malicious botnet detection for Cequence's Bot Mitigation SaaS Platform by an average of 20% per client, using a range of rules and machine learning pipelines on HTTP request data.
- Lead the response to multiple web application attacks, working closely with external engineering and security teams - increasing Cequence's CQ-AI consultancy and threat reporting services annual revenue by \$600K+.
- Reverse engineered multiple account takeover, web scraping, gift card fraud, and credit card rotation attacks and successfully implemented them on test and production servers.

[Insight Data Science, San Francisco, CA, USA](#)

Sep 2018 - Dec 2018

Data Science Fellow

- Developed a web-app using natural language processing to generate history podcast recommendations.
- Built a pipeline using Word2Vec to find content based on semantic similarity to user-inputted text.

[Okinawa Institute of Science and Technology, Onna, Okinawa, Japan](#)

Nov 2017 - Aug 2018

Postdoctoral Scholar

- Applied neural network classifiers to investigate the color-changing capabilities of cuttlefish.
- Used Generative Adversarial Networks (GANs) to model camouflage adaptation to diverse environments based on predator visual capabilities.

[University of Sussex, Brighton, East Sussex, UK](#)

Sep 2013 - Oct 2017

Postgraduate Researcher

- Conducted a range of experiments using digital image analysis, inferential statistics, as well as unsupervised and supervised models to investigate the visual and rapid camouflage capabilities of cephalopod species.
- Used logistic regression classification on Gabor filter outputs of cephalopod images, tuned to predator visual capabilities, to support theories on disruptive camouflage.
- Applied Gaussian Mixture Models (GMMs) with Principal Components Analysis (PCA) on scored images of cephalopod camouflage patterns to suggest cephalopod patterning is continuous, not discrete.

EDUCATION

PhD, Biology, University of Sussex

2017

Bachelors, Biology, Minor in Psychology, Indiana University

2013

LANGUAGES & FRAMEWORKS

Python SQL MATLAB Java* Scala* Javascript* | AWS H2O Spark Git Docker Jupyter VSCode

*indicates familiarity