

Mike McCourt

EXPERIENCE

February 2020 - PRESENT: **Invoca** — *Principal Data Scientist & Senior Principal Data Scientist*

- Took initiative to work across teams to identify important customer pain points.
 - Developed a new natural language classifier model, better suited to customers' needs. Production-ready code, with patent application submitted.
- Collaborated closely with directors of the product and data science teams to develop a plan to migrate customers from acquired company DialogTech's platform to Invoca's.
- Re-designed our entire machine learning codebase to support both scale and flexibility for R&D.
- Continued R&D progress while mentoring an intern.

March 2019 - February 2020: **Invoca** — *Staff Data Scientist*

- Winner of the President's Club award for exceptional contribution to the company.
- Developed a Bayesian "Deep Learning" framework for natural language based on the hierarchical Pitman-Yor process. ([Press release](#), [Blog post](#), [Analyst report](#), [Interview](#))
- Mentored 3 interns on R&D projects. (One joined our team for a year before starting his Ph.D. program.)
- Primary inventor for three patent applications
 - [Patent US 11,115,520](#): Signal Discovery Using Artificial intelligence Models. Granted.
 - [Patent US 2021/0118433](#): Detecting Extraneous Topic Information Using Artificial Intelligence Models. Published.
 - [Patent US 2021/0118432](#): Generating Training Datasets for a Supervised Learning Model Using Outputs from a Discovery Model. Published.

February 2018 - March 2019: **Invoca** — *Data Scientist*

- Replicated machine learning provided by a major 3rd party service to bring all technology in house. Significantly reduced our COGS and improved our AI business model.
- Met with members from product, sales, and customer success teams to better understand customers' desires and pain points.
 - Prototyped new solutions.
- Mentored an intern on an R&D project. (He joined the team as a Data Scientist in August 2022.)
- Sole inventor on two patent applications:
 - [Patent US 10,719,783](#): Binary Signal Classifiers that tolerate incorrect training data. Granted.
 - [Patent 16/359809](#): Performance Score Determiner For Binary Signal Classifiers. To be granted.

2014 - February 2018: **Hubble Fellow, KITP Fellow, and ITC Fellow**

- Recipient of research fellowships from NASA, UCSB, and Harvard University.
- Authored 26 research papers cited 1,687 times as of August 2022.
- Conducted self-directed research on 10 different topics over 11 years.
- Raised over \$2 million in funding and supercomputer time to run a small research group.
- Conducted an international job search and hired a postdoctoral research scholar.
- Mentored two undergraduate students and three graduate students on multi-year projects.
- Organized and taught a fluid dynamics "bootcamp" at UCSB after recognizing it was needed.

EDUCATION

2014: **UC Berkeley** — *Ph.D. and M.A. in Astrophysics*

Recipient of two department awards for outstanding graduate research.

2008: **Stanford University** — *B.S. in Physics with concentration in Theoretical Physics*