Ryan Beauchemin

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Experience

Redbird 2025-2026	**Lead of Data Science** • As the lead of data science reporting directly to the CEO, I was responsible for a number of data science initiatives for a workflow building platform, including no-code model training, mix media modeling, and agentic generative AI. • The work most attractive to our clients was my suite of tools that write, explain, and execute code reliably (< 2% reported hallucination rate) to generate data science pipelines with minimal coding time. The robustness came from utilizing langgraph and langchain with OpenAI StructuredOutput API to make specialized connected agents.
Peacock 2022 - 2025	**Director and Acting VP of Data Science, Personalization and Recommendations** • As Director, I continued building on our suite of Home page and PDP personalization and also expanded my scope. • I extended into new work with Search, Marketing, and Merchandizing, and increased leadership to a team of 12. • I have completed multiple Generative AI projects to expand data sources and support our existing models. • As the acting Vice President, I am also actively assessing 3-5 year plans and presenting in Steering Committee meetings. **Sr. Manager of Data Science, Personalization and Recommendations** • As Senior Manager with a smaller team of only 3, I have been able to drive total lifts of more than 3% in hours and 1% in streaming days during AB tests, contributing to tens of millions in incremental ad and subscriber revenue. • We have built graph neural network solutions, time-series models, fully connected transformer models, NLP embeddings, and Reinforcement Learning solutions to support the creation of the over 20 models that now support the entire global suite under NBCU: Peacock, Sky Showtime, and Showmax. • We created an application for executives, editors, and product teams to explain and visualize our models for transparency.
Lowe's 2015 - 2022	**Sr. Manager of Data Science and Analytics** • With a team of 17 in the U.S. and Bangalore, I expanded on our solutions for freight, space, and assortment optimization. • We developed an internal tool that gave merchants the power to estimate profit and margin of any item assortment in any set of stores, providing a way to negotiate with vendors and make the best decisions on what to stock in every store. • Our assortment planning work led to 2x in merchandising productivity with an incredibly efficient deep neural net model visualized via a UX-optimized React application layer. • Later, I led an ML platform team, building SSO-integrated MLFlow, easier database utilities, and created an automated outlier detection mechanism employing a novel technique of multi-modelling to create a powerful meta-algorithm. **Principal Data Scientist** • As Principal, I led and contributed with 4 people to deliver demand prediction neural net model rivaling IBM and SAS models in place at the time, with the capability of learning with pricing, promotion, freight, space, and assortment. • I created a vendor freight optimization tool and a space optimization tool, together driving measured incremental value in the hundreds of millions and just under a billion for margin and revenue respectively. • I ran SQL, Cloud and Agile process training for the entire department of over 100 data scientists, analysts, and engineers. **Senior Data Scientist** • As Senior, I built 30 more models, tested with a further lift of 13%, leading to hundreds of millions in incremental revenue. • I focused on automation and helped hire and train new people to take over my models in recs and personalization. • I expanded into Lowe's first projects in merchandising, marketing, and store operations, working as a one-man startup. • We hired 80 data scientists to expand on the projects I started and sold to internal stakeholders during this time. **Data Scientist** • As the first data scientist at Lowe's, my first model won an AB test against Adobe with a 250% lift in incremental revenue. • I reduced cost by $7 million/year after ending a contract and my success led to us expanding our data science program. • I built 20 more models to support the home page, search, and product detail pages, driving 15% lift in new surfaces.
Academia 2012 - 2015	**Astrophysicist,** *NC Astronomy Research Center & UNC Astronomy* • With Dr. Sheila Kannappan, I ran dynamic observation, processed raw telescope data in Python and Fortran, and ran imaging for the 4.1-meter Chilean SOAR telescope, focusing on determination of 3D galaxy movement from 2D projections. • With Dr. Dan Reichart, I worked on cataloging the largest database for Gamma Ray Burst afterglows, writing updates to a SQL database. In addition, I was a teaching assistant for the Introductory Astronomy course at UNC. • With Dr. Patrick Treuthardt, I determined relationships between galactic dust lane structure, axial ratios and pattern speeds, analyzing data on large screens where museum patrons could watch and ask questions. We were featured in Wired and CNN after I discovered the first Double Hoag's galaxy. In addition, we ran interactive H-Alpha telescope sessions for patrons to safely observe the sun.

Education

2022	Master's Degree in Computer Science, *Georgia Institute of Technology*
2015	Bachelor's Degree in Physics, *University of North Carolina at Chapel Hill*

Expertise

AI/ML	Python, Keras, Tensorflow, Langgraph, Langchain
Software	Streamlit, React, Flux/Redux, NodeTS/JS, FastAPI
Data	Druid, Presto, Hive, HBase, Teradata, PostGres, and other SQL/NoSQL variants
CICD	Git, Jenkins
Cloud	GCP, AWS