

# Enrique AREYAN VIQUEIRA

www.enriqueareyan.com

LinkedIn Profile

Email : enrique3@gmail.com

Mobile : +1-812-340-6290

## EXPERIENCE

---

- **Convoy Inc.** Seattle, WA, USA  
*Research Scientist II* *Oct. 2021 - Present*
  - Overhauled the company's carrier-facing matching mechanism. Developed large-scale simulations and proof-of-concept models in AWS' Elastic Container Service (ECS), demonstrating an opportunity to increase margins by 8%.
  - Developed a Dynamic Programming based load Machine Learning pricing model. Coded the model in Python as a microservice with Flask. Implemented model using continuous deployment and integration tools (Github+CircleCI). Initial A/B tests showed 12% margin increase with a decrease of 5% on quality related costs.
  - Prepared and validated models' input data stored in Snowflake. Develop online input data monitoring tools using Datadog and integrated them with PagerDuty, avoiding stale models reaching production.
  - Developed a Bayesian framework for continuous assessment of carrier quality. Launched an A/B test that showed final economic improvement on each match using Bayesian framework. Developed Metabase dashboard to track success metrics. Improved matching cost by \$10 per match.
  - Developed a data-driven disaster response simulator that measured changes in supply freight capacity in response to a natural disaster. Presented results to stakeholders in Jupyter Notebooks thus paving the way for future integration of FEMA loads to the marketplace.
  - Interviewed and hired (20+ candidates) at the junior and mid-senior levels, directly supporting a thriving community of Research and Data Scientists.
  - Contributed to the creation of a framework to translate the app at scale.
- **Pinterest.com** Remote, USA  
*Marketplace Design Intern* *Summer 2021*
  - Developed Reinforcement Learning algorithms to maximize pinners' long-term ad engagement.
  - Implemented and validated Airflow PySpark data pipelines to train Reinforcement Learning agent.
- **National Institute of Advanced Industrial Science and Technology (AIST)** Tokyo, Japan  
*Automated Negotiation Researcher* *Oct. 2018 - May 2019*
  - Developed an Artificial Intelligence bot that placed 2nd in the International Automated Negotiating Agents Competition (ANAC/SCML), an International competition to advance research on automated agent negotiation.
  - Published 2 papers on top-tier Artificial Intelligence venues on Automated Negotiation, Empirical Game-Theoretical Analysis, and Machine Learning-powered Mechanism Design.
- **Amazon.com** Seattle, WA, USA  
*Applied Research Scientist Intern* *Summer 2017, 2018, and 2019*
  - (2019) Developed Mechanism Design solutions for Sponsored Products, budgeted-constraint ad campaigns.
  - (2018) Pushed to production a Machine Learning model to detect ad relevance based on shoppers' queries.
  - (2017) Developed a Machine Learning adaptive buying strategy for products with little historical information.
- **Brown University** Providence, RI, USA  
*Researcher, Computer Science Department.* *Aug. 2015 - May 2021*
  - Conducted Research on Empirical Game-Theoretic Analysis and Empirical Mechanism Design. Published papers on top-tier Artificial Intelligence venues. Won multiple Artificial Intelligence bot competitions.
  - Taught a core undergraduate class in Artificial Intelligence (60+ students), and an introductory class in Computation for the Social Sciences and Humanities (25+ students). Managed a team of TAs for both classes.

## EDUCATION

---

- **Brown University** Providence, RI, USA  
*PhD in Computer Science (specialization: Machine Learning-powered Mechanism Design)* *2021*
- **Indiana University** Bloomington, IN, USA  
*Master of Arts for Teachers in Mathematics (2015), Master of Science in Computer Science (2013)*
- **Universidad Central de Venezuela** Caracas, Venezuela  
*Bachelor of Science in Computer Science (specialization: Artificial Intelligence)* *2010*