

Eryk Banatt

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Experience

Riot Games

SENIOR RESEARCH SCIENTIST

Los Angeles, CA

February 2023 - Present

- Perform games-oriented machine learning research for content generation
- Use LLMs, diffusion models, and other generative models to create prototypes which demonstrate potential value adds for teams within Riot

The Johns Hopkins University Applied Physics Lab

ARTIFICIAL INTELLIGENCE RESEARCH SCIENTIST

Laurel, MD

April 2019 - January 2023

- Evaluated and extended upon cutting edge machine learning techniques to solve sponsor-posed problems
- Developed novel algorithms for learning under domain shift, particularly in convolutional neural networks trained with synthetic data
- Developed new methods for uncertainty estimation of black-box models using surrogate models and adversarial attacks
- Led teams of 3-5 people on multiple efforts to perform fundamental research supporting large projects

Miami International Holdings Inc.

JUNIOR TRADING OPERATIONS SUPPORT SPECIALIST

Princeton, NJ

October 2017 - March 2019

- Wrote regression test cases to debug functionality in exchange matching engine software

Education

Johns Hopkins University

M.S. IN ARTIFICIAL INTELLIGENCE

Baltimore, MD

August 2021 - August 2024 (Expected)

Yale University

B.A. IN COGNITIVE SCIENCE

New Haven, CT

August 2013 - May 2017

- Concentration: Expertise and Expert Performance

Projects

Melee Stats

CREATIVE DIRECTOR

February 2020 - Present

- Data Lead for SSBMRank Top 100 Rankings
- Write, edit, and produce for YouTube channel with 20k+ subscribers and 1.5M+ views

planetbanatt.net

PORTFOLIO WEBSITE

June 2016 - Present

- Static website with Bootstrap frontend generated via emacs org mode html export
- Hosts write-ups for projects, see: planetbanatt.net/projects.html

Input Latency Perception in Expert-Level Gamers

SENIOR THESIS PROJECT

May 2017

- Programmed a double-blind input latency perception task using an Arduino microcontroller
- Demonstrated a statistically significant ($p=0.0008$) difference in perceptual ability between control and expert video game competitors

Skills and Coursework

Skills Python, Pytorch, Keras, Tensorflow, scikit-learn, Pandas, R, Emacs, Git, SQL/SQLite, \LaTeX , Davinci Resolve Studio 17

Coursework

Artificial Intelligence, Language and Computation, Intelligent Robotics, Computational Vision & Biological Perception, Algorithms, Data Structures, Linear Algebra, Multivariable Calculus & Complex Analysis, Applied Machine Learning, AI-Enabled Systems

Research

Synthetic Data, Domain Adaptation, Adversarial Attacks, Active Learning, Label Prioritization, Object Detection, Semantic Segmentation, Semi-Supervised Learning, Uncertainty Estimation, Depth Estimation, Occlusion Reasoning

Publications

Banatt, Eryk, Vickram Rajendran, and Liam Packer. "Target Domain Data induces Negative Transfer in Mixed Domain Training with Disjoint Classes." arXiv preprint arXiv:2303.01003 (2023).