

# Bryan Roque

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## Experience

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Amazon Web Services • AI Team

*Software Engineer*

*June 2019 - June 2020*

- Collaborated with researchers to update our Named Entity Recognizer (NER) to use BERT model with MXNet Gluon, a deep learning library. Resulted in over 3% higher F1-Score.
- Came up with the data ingestion architecture, wrote the design documents, and got those through review to then implement.
- Identified a bug in the Hyperparameter Optimization step that gave customers suboptimal models. Resolved the bug which then increased the average accuracy by over 5%.
- Wrote operational scripts, integration tests, and bug fixes.

Textron • Imagery and Data Analysis Team

*Software Engineer Intern*

*June 2018 - August 2018*

- Trained a Convolutional Neural Network with satellite imagery to perform Semantic Segmentation and extract features such as pervious/impervious surfaces, vegetation, and bodies of water.
- Used this model to create a web application that identifies desirable locations for companies to place their buildings. Geospatial team later adopted this feature for their BI dashboards.

## Education

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Purdue University

*B.S., Computer Science*

*Track, Machine Intelligence*

*August 2015 - May 2019*

## Leadership

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Dance 2XS Purdue

*Executive Director*

*February 2018 - February 2019*

- Led a hip-hop dance team of over 30 members.
- Directed Purdue's largest hip-hop dance event. Invited 12 professional/collegiate teams from different states around the midwest and 5 world class dancers to perform, teach, and judge battles. Made over \$4600 profit in ticket sales.
- Later entered our team in a talent competition for an Indianapolis diwali event. Won 1st place with \$1000 prize.

Purdue Puzzle Club

*Cofounder*

*March 2016 - May 2017*

- Founded Purdue's first club for logic puzzles, brain teasers, and Rubik's cubes.
- Wrote the initial constitution describing board positions, appointment procedures, purpose, etc., and registered our group to become a recognized university organization
- Currently at over 50 active members.