Aman Jaiman

Computer Science · Mathematics

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Education

University of Maryland
College Park, Maryland

Master of Science in Computer Science | Bachelor of Science in Computer Science and Mathematics
Aug 2021 - May 2022

- Relevant Courses (M.S.): Multilingual NLP, Numerical Methods for Data Science and Machine Learning, Foundation of Deep Learning
- Relevant Courses (B.S.): Intro to Data Science, Algorithms, Intro to Machine Learning, Deep Learning (using PyTorch), Data Structures

Experience

Microsoft - Esports Team
Redmond, Washington

Software Engineer - Full Stack
August 2022 - Present

- Backend: Using .NET framework to create and manage our internal API that is used by all canvases to retrieve data. Conceptualized and engineered processes to streamlining our E2E game developer onboarding process through the use of Azure functions and a new API.
- Frontend: Building UX using FAST.design for various components on our canvases. Integrated these components to SDK functions so game developers and users can explore enriching experiences using our product.
- Facilitate discussion around our platform to drive design ideas and product development.

Microsoft - AKS
Remote - Clarksburg, Maryland

Software Engineer Intern
May 2021 - Aug 2021

- Joined the Azure Kubernetes Service (AKS) infrastructure team. Analyzed underlay cluster creation time and brainstormed techniques to optimize creation time for faster testing and deployment.
- Created a new workflow for deploying new test underlay clusters where total creation time was reduced by nearly 50% and specific tests were reduced by 83%. Added new functionality to the command line including resetting previously deployed clusters, and documentation to make it easier for developers to onboard.
- Intern Podcast: Formed a team to handle production for a new intern podcast at Microsoft: a new way for interns to learn from FTE experiences, and a platform to share that throughout the organization.

Microsoft - AKS
Remote - Clarksburg, Maryland

Software Engineer Intern
May 2020 - Aug 2020

- Worked with the Azure Kubernetes Service (AKS) team to onboard AKS onto Azure Event Grid so that customers could receive actionable events. Designed and presented the architecture of the service that was needed to onboard.
- Developed an end-to-end service that was responsible for serving HTTP requests from Event Grid using gRPC and protobuf. Integrated the service into the main build and deployment for AKS.
- Created artifacts and documentation that generate code stubs and help with testing. These artifacts can be used by any Azure service that is looking to onboard to Azure Event Grid, cutting down the onboarding time by weeks.
- MS Invent: Formed a team and built a new event where interns can pitch Microsoft product ideas to judges, receive mentorship and feedback, and meet with executives to further their idea.

University of Maryland Institute for Advanced Computer Studies
College Park, Maryland

Research Assistant
Jan 2020 - May 2020

- Analyzed various transformers used for text generation and completion: GPT-2, HuggingFace ConvAI, DialoGPT; to do preliminary testing on creating generation use cases.
- Fine-tuned existing models on newly collected data on Obama and Trump and wrote generation code to create an automated debate system between bots where a user can act as a moderator.

Applied Information Sciences, Inc (AIS)
Reston, Virginia

Software Engineer Intern
Jun 2019 - Aug 2019

- Developed a search term generator for a corpus of news articles using Microsoft Cognitive Services Text Analytics API. The key entities and documents were stored in MongoDB and used in a document search demo application in C# for government agencies.
- Created a console application using a LUIS docker container to demo to government agencies a way to create Question/Answer bots for their internal use.
- Researched the application of machine learning in software development. Built a custom extractor in Kotlin for Cobol and modified the Code2Vec model to classify the extracted code.

Skills

Programming Languages	Python, C#, Java, JavaScript, TypeScript, C, Ruby, Golang, OCaml, MATLAB, LaTeX
Libraries & Frameworks	.NET Framework, ASP.NET MVC (with Razor Pages), Django, React, FAST.design, Bootstrap
Machine Learning & Data Science	PyTorch, Pandas, NumPy, scikit-learn, NLTK, Microsoft Cognitive Services

Projects

OWL Standings - www.owlstandings.com

Independent Work

Developer — *2019 - Present*

- Built a web app for the Overwatch League (OWL) community. OWL Standings is an interactive way for users to see which teams will qualify for the upcoming tournament based on the user's predictions of the matches leading up to it.
- Professional OWL team asked me to generate scenarios for them to qualify using the site. They liked it so much they asked for it again in the next tournament cycle. OWL Standings has been really well received by the rest of the community as, and is used by thousands of users around the world.
- The backend for the app use the Django framework with a SQL database. The frontend was developed using Bootstrap and Javascript, using React. Deployment was done using Heroku.

Zero-Shot Translation for Indian Languages

CMSC828I Final Project

Researcher — *2022*

- Researched the topic of zero-shot translation, specifically for low-resource languages.
- Applied zero-shot methods for a variety of Indian languages to analyze the effect of similarities in two languges and their zero-shot translation results.
- We find that geological proximity and language family are key indicators of better zero-shot translations. Additionally, using Levenshtein distance as the similarity metric also correlates higher to BLEU scores.

Analysis of COVID-Twitter-BERT

CMSC828W Final Project

Researcher — *2022*

- Performed replication and extension studies on the COVID-Twitter-BERT model (CT-BERT).
- We argue that the metrics used in the original CT-BERT paper are not the best metrics to judge improvement across different datasets.
- In our experiments we find that the CT-BERT model performs well on other Twitter based datasets, as well as COVID-19 related datasets, but does not outperform the standard BERT model on other types of data.

Exploring Airbnb Prices in New York City

CMSC320 Final Project

Developer — *2019*

- Performed end-to-end data analysis of Airbnb data in New York. Determined key indicators of price and developed a regression model to predictor price with those features.
- Libraries worked with: Pandas, NumPy, NLTK, Seaborn and Matplotlib, Plotly, scikit-learn