

# Jonathan Wang

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## WORK EXPERIENCE

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### Amazon.com, Inc.

Summer 2021 - Summer 2023

*Software Engineering Intern (Advertising Identity Team) | Summer 2023*

NYC

- Architected the prototype of a new Software as a Service solution for advertising identity graph resolution in AWS, focused on providing a scalable, robust, cost-efficient, and user-friendly data processing platform for private clients.
- Leveraged a comprehensive suite of AWS services, including S3, Lambda, DynamoDB, and Redshift to create a serverless data identification pipeline service, along with ECR, Service Catalog, Docker, CloudFormation, and AWS CDK for packaging and distributing the software to clients.

*Software Engineering Intern (FireOS Architecture Team) | Summer 2021 - Summer 2022*

Remote

- Developed a visualization tool using Dash and Vis.js for mapping the FireOS build tree which streamlined the organization's development workflow through improved efficiency in managing and modifying the OS architecture.
- Researched and prototyped a hardware passthrough implementation in the Android Emulator build to provide a more realistic and complete testing environment for FireOS developers through increased feature support.

### Rutgers Center of Alcohol and Substance Use Studies

Dec 2019 – May 2021

*Research Assistant*

New Brunswick, NJ

- Designed and benchmarked machine learning models trained on fMRI data to give researchers insight into the contributing factors of substance abuse on brain development.. These models included: XGBoost, random decision forests, neural networks with automated Bayesian hyperparameter optimization, and other popular models.
- Developed machine learning model interpretation methods involving the use of variable importance plots, local interpretable model-agnostic explanations, and partial dependence plots

### Rutgers Wireless Information Network Laboratory

Summer 2018

*Research Intern*

New Brunswick, NJ

- Developed signal processing algorithms for research on the use of wireless signals for mapping indoor environments

## PROJECTS

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### DribbleDynamics - NBA Player Stat Visualizer

Spring 2024

*Data Visualization Final Project*

- Built a data visualization web app for tracking insights into NBA players' season statistics, career progressions, individual game performances, and playstyle comparisons. Tools: ReactJS, D3.js, Flask, Pandas, MySQL, AWS

### RKM - Recipe Sharing Social Media Application

Spring 2022

*Software Engineering Final Project*

- Lead designer and product owner for a team of 5 to build a social media application for professional chefs and home cooks to share, critique, and stock recipes. Tools: React Native, REST API, Flask, MongoDB

### Evaluation of YOLOv7 Model for Real-time Object Detection in FPS Games

Spring 2023

*Computer Vision Research Project*

### Multimodal Visual-Language Models for Context Based Image Retrieval

Spring 2023

*Natural Language Processing Research Project*

## EDUCATION

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### Rutgers University, New Brunswick

May, 2024

*B.S. and M.S. in Computer Science. GPA: 3.91 (B.S) / 3.86 (M.S)*

New Brunswick, NJ

## SKILLS

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**Programming Languages:** Python; Java; Javascript; Typescript; HTML; CSS;

**Technical Skills:** Agile Development; DevOps; Git; Jira; Software Architecture; Cloud Computing; AWS; Docker; Machine Learning; Artificial Intelligence; Tensorflow; Databases; SQL; MongoDB; REST; Django; Flask; React;