

DEEP PATEL

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EDUCATION

Towson University- BS in Computer Science

Towson, MD, May 2019

GPA-3.98/4.00 | Summa Cum Laude, Dean's List (8x), International Student Scholarship.

TECHNICAL SKILLS AND INTERESTS

Programming: C(5), Python (5), Java (5), JavaScript (3), C++ (3), HTML5/CSS (3), Scala (3), Kotlin (3), Perl (1).

Scale: 1-5 = familiar to advanced

Databases / ETL: MySQL, PostgreSQL, SQLite, MongoDB, Spark, BigQuery, DynamoDB, GraphQL.

ML / Deep Learning: Pytorch, Numpy, MLflow, OpenCV, TensorRT, Triton Inference Server, PySpark.

Others: Linux, Android, Windows, AWS, Google Cloud, Docker, Kubernetes, Shell Scripting, Postman, Git, Agile Practices, Android development and Firmware development.

Hobbies/Interests: Machine Learning/AI, Deep Learning, Embedded Devices, Spacecrafts, Wildlife, Yoga, and History.

EXPERIENCE

NEC Labs America- Machine Learning Department

Princeton, NJ

Software Engineer

September 2019 – Current

- Developed the production ready **backend** for a video understanding system on AWS using **Lambda**, ECS, **EC2**, DynaomoDB, SNS, SQS, Elemental Media Convert, **Kinesis**, API Gateway, AppSync, and Redis ElastiCache.
- Converted the existing single camera system to support multiple cameras with batch processing, python **multiprocessing** and threading modules.
- Saved more than **\$10,000** of cloud cost per year by using cost efficient techniques and implementations for the backend.
- Optimized** the video reasoning pipeline to improve overall throughput and reduced GPU memory requirements.

Towson University - Computer Science Department

Towson, MD

Research Assistant

August 2018 – May 2019

- Performed independent research on classification of edible wild plants using transfer learning.
- Trained and fine-tuned RESNET50 model and handled data imbalance to improve model performance by 15%.
- Carried out **Exploratory Data Analysis** and solved data imbalance using SMOTE techniques.
- Used **Confusion matrix** and **ROC curve** to evaluate the model performance.

INSuRE - Johns Hopkins University -APL

Baltimore, MD

Machine Learning Lead

December 2018 – May 2019

- Actively involved in all phases of data science project life cycle including Data Extraction, Data Cleaning, Data **Visualization** and building Models.
- Used **Natural Language Processing (NLP)** to detect malicious websites and deployed the model to AWS.
- Integrated the trained **LSTM** model into the backend of a chrome extension for ease of usage.
- Visualized the data using **TSNE** and **SHAP** to find accurate correlation between features.

EXTRACURRICULAR ACTIVITIES

Cool Dictionary Project, Group Leader

- A smart dictionary for android using SQLite, MVC, Services, Fragments, etc.
- Integrated TensorFlow lite model in the app for sentiment analysis using **NLP** and **TF-IDF**.
- The app uses **RESTful API** from oxford dictionary.

CheckCasher Java application, Solo Project

- Developed a Java swing application for a business to keep track of check cashing customers using an embedded SQL (Apache Derby).
- Implemented required features using **object-oriented design** and **agile methodologies**.
- Wrote complex **SQL queries** to store and extract data from the database.