Reet Yogesh Kothari

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EDUCATION

B.S. in Computer Science, Minor in Business Administration — **December 2023**
University of Washington – Seattle, WA — *GPA: 3.63*

Relevant Coursework: Full-Stack Development, Data Science, Data Engineering, Distributed Architecture, Network Programming.

EXPERIENCES

Embedded Software Design Intern — **Okemos, MI**
Perasia Technologies LLC — *April 2023– August 2023*

- Trained an ECG beat classifier for Arrythmia detection using an ANN with 99.4% test accuracy.
- Improved the ECG R-peak detection by 10% through signal filters and performed heart rate variability analysis.
- Streamlined development by hosting a FastAPI on AWS Lambda to query data from the S3 bucket and DynamoDB.
- Enforced AWS IoT core rules for preprocessing data and storing it in the S3 bucket.

Cybersecurity Research Intern — **Bengaluru, India**
Siemens Technology and Services Pvt. Ltd. — *July 2022 – September 2022*

- Assimilated research papers and Siemens Intranet resources to explore security exploits through firmware updates in OT systems.
- Proposed a technical report that was used to improve security features on the SIMATIC controllers.

Non-Technical Roles: FIG Leader Autumn 2022 (Gave a weekly seminar to 24 freshmen students, collaborated with other leaders to develop modules), Classroom Technician Winter 2023 (Worked in fast paced environment, provided customer service).

PROJECTS AND AWARDS

Code Racer — ***MongoDB, Express, Socket*** **|** **Link**

- Created a multiplayer type racing platform that supports simultaneous gameplay for multiple parties through socket connections.
- Enacted Java prompts to improve syntactic knowledge, typing speed, and styling etiquette.
- Presented a hypothetical solution to efficient and professional programming practices across a team.

Garbage Classifier — ***PyTorch*** **|** **Link**

- Trained a deep convoluted neural network with a 12-class garbage dataset to classify images for waste management.
- Leveraged ResNeXt blocks to support multi-epoch training without the disappearing gradient issue.
- Scored an 88.7206% test accuracy and performed augmentations to predict custom user images.

Sudoku Website — ***REST, MongoDB, Express*** **|** **Link**

- Constructed a Sudoku API to solve puzzles and utilize backtracking algorithm to generate new ones with varying difficulties.
- Integrated the API into a platform that support user authentication, interaction, and activity analysis.

Best Use of Data Award – NASA Space Apps Hackathon Seattle — ***Pandas, TensorFlow***

- Analyzed DSCOVR's magnetic flux data from solar winds to monitor for spikes and give an early indication for potential geomagnetic storms with about 90% accuracy.

Racial Justice — ***Dplyr, Shiny.R*** **|** **Link**

- Surveyed data related to COMPAS scores, racial risk sensitivity, fatal shooting encounters, and juvenile arrests to recognize a pattern of injustice and determine which minorities were the most affected.

Sharded Linearizable KV-Store (CSE 452) — ***Java*** **|** **Link**

- Developed a sharded linearizable key-value store that utilizes Paxos servers to create a load-balancing, highly fault-tolerant distributed system that uses a two-phase commit protocol to support multi-key client transactions.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C++, C, R
Web Development: Node.js, React.js, Vue.js, REST, GraphQL, Mongoose, Socket.io, Express, Bootstrap
Database: MySQL, MongoDB, Azure SQL, DynamoDb, Spark
Miscellaneous: AWS, PyTorch, TensorFlow, AWS, Pandas, OpenCV, Scikit-learn, SciPy, Docker, BlueZ