

# Reet Yogesh Kothari

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## EDUCATION

**B.S. in Computer Science, Minor in Business Administration**

*University of Washington – Seattle, WA*

**December 2023**

GPA: 3.63

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

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## EXPERIENCES

**Embedded Software Design Intern**

*Perasia Technologies LLC*

**Okemos, MI**

*April 2023– Present*

- Trained an ECG beat classifier for Arrhythmia detection using an ANN with 99.4% 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.
- Integrated AWS IoT core rules for preprocessing data and storing it in the S3 bucket.
- Implemented software solutions for Autonomous, Advanced Driver Assistance Systems (ADAS) using Embedded C and C++.

**Cybersecurity Research Intern**

*Siemens Technology and Services Pvt. Ltd.*

**Bengaluru, India**

*July 2022 – September 2022*

- Utilized the Siemens Intranet and research papers to explore security exploits through firmware updates in OT Systems.
- Created a technical report which was used to improve security features on the SIMATIC controllers.

## PROJECTS AND AWARDS

**Code Racer**

**MongoDB, Express, Socket | [Link](#)**

- Integrated socket connection to create an online, competitive type racing platform that supports multiple parties.
- Prompts java code to improve syntactic knowledge, coding speed, and style etiquette.

**Garbage Classifier**

**PyTorch | [Link](#)**

- Trained a deep convoluted neural network with a Kaggle dataset to classify garbage for waste management.
- Used ResNeXt blocks to train for multiple epochs without the disappearing gradient issue.
- Scored a test accuracy of 88.7206% and implemented augmentations to predict custom user images.

**Sudoku Website**

**REST, MongoDB, Express | [Link](#)**

- Constructed a Sudoku API to solve puzzles or generate them with varying difficulties ranging from easy to very hard.
- Expanded on the API with a web application that also manages user authentication, interaction, and activity.

**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 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.

**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).

## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript, C++, C, R

**Web Development:** Node.js, React.js, Vue.js, REST, GraphQL, MongoDB, Socket.io, Express, Bootstrap

**Database:** MySQL, MongoDB, Azure SQL, DynamoDB, Spark

**Miscellaneous:** AWS, PyTorch, TensorFlow, AWS, Pandas, OpenCV, Scikit-learn, SciPy, Docker, BlueZ