Desmond Lobo

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EDUCATION

- **Rutgers University** - *New Brunswick* | Master of Science in Computer Science | **GPA: 4.00** May 2024
- **Mumbai University** - *India* | Bachelor's in Computer Engineering | **CGPA: 9.32/10.00** Oct 2020

PROGRAMMING SKILLS

- **Languages**: Python, Java, Javascript, SQL, HTML5, CSS3
- **Libraries/Frameworks/Utilities**: Spring Boot, ReactJs, NodeJs, RabbitMQ, FastAPI, Flask, Tensorflow, Pytorch, Matplotlib, Numpy, Pandas, BeautifulSoup, Spacy, NLTK, Docker, git, SVN, Apache Tomcat, Excel.
- **Databases**: MySQL, MongoDB, Redis

EXPERIENCE

- **Part-time Lecturer - CS170 (Computer Applications for Business)** Sept 2022 - May 2023
  Rutgers University *New Brunswick, NJ*
  - Taught **100+** undergraduate students Microsoft Excel (Data analysis using Excel functions, VLOOKUP and Pivot tables) and the fundamentals of web design using HTML/CSS, JavaScript and SQL Database.

- **Software Engineer (AI)** Dec 2020 - Mar 2022
  Cere Labs Pvt. Ltd. *Mumbai, India*
  - Spearheaded the end-to-end development of a Loan monitoring bot for fraud detection, with Docker deployment, resulting in **3 new client onboardings**.
  - **Boosted Analytics bot performance by 80%** by improving data flow, enhancing knowledge base and implementing parallel data persistence techniques.
  - Added user authentication and control level authorization in the platform using **Spring security architecture**.
  - Formulated a generalized human consultation framework using Spring Boot, which **reduced system error rate by 30%** through an error correction protocol triggered by uncertain bot inferences.
  - Single-handedly built a Knowledge Management Tool with React.js and FastAPI for knowledge-data creation, curation and visualization with JSON-Graphs.

- **Intern - Software Engineer (AI)** Jun 2020 - Dec 2020
  Cere Labs Pvt. Ltd. *Mumbai, India*
  - Designed Inter-Bot communication endpoints using RabbitMQ and composed database schema, SQL scripts and **RESTful APIs** in Java for request life-cycle tracing.
  - Programmed a **web-scraper** for company name extraction and classification using BeautifulSoup and **Bayesian Probabilistic Models**.
  - Took initiative to develop a Bounding-Box web application which **halved the data annotation time**.

PROJECTS

- **DashAnalytics**: Created a **MERN Stack** Admin Analytics Dashboard, utilizing React.js (Material UI, Data Grids, Nivo Charts) and Redux Toolkit for the frontend, and MongoDB, Express.js, Node.js and Mongoose for the backend.
- **DigiFace**: Implemented Face classification using Naive Bayes, Neural Network and Support Vector Machine (SVM) algorithms with following accuracy. **Naive Bayes: 88%, Neural Network: 85%, SVM: 89.6%**.
- **FastTrajectoryReplanning**: Developed a maze-traversing agent using Repeated Forward A* (RFA) and Adaptive A* algorithms with output path animated using Matplotlib. The **Adaptive A* expands 20% fewer nodes than RFA**.
- **Chopsticks**: Coded a computer vision and AI based game of sticks, implemented using PyGame library. The game uses **ResNet** Models for hand detection and finger classification and **MiniMax algorithm** for CPU decisions.
- **ListenUp**: Built a counseling website developed using HTML, CSS, Javascript, PHP and MySQL that provides an appointment scheduling portal and features a mental-health blog.