

Desmond Lobo

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EDUCATION

- **Rutgers University** New Brunswick, NJ
Master of Science in Computer Science; GPA: 4.00 *Sept 2022 – May 2024*
- **Don Bosco Institute of Technology** Mumbai, India
Bachelor of Engineering in Computer Engineering; CGPA: 9.32/10.00 *Aug 2016 – Oct 2020*

EXPERIENCE

- **Part-time Lecturer - CS170 (Computer Applications for Business)** Sept 2022 - Dec 2022
Rutgers University *New Brunswick, NJ*
 - Taught 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 bank fraud detection including docker deployment. This bot helped onboard 3 new clients.
 - Qualitatively analyzed the outputs to improve inference capability of the Analytics bot and optimized it's performance using parallel data persistence, thereby reducing the processing time by 80%.
 - Added method and control level authorization in the platform using the Spring security architecture.
 - Formulated a generalized Human consultation framework using Spring Boot that invokes an error correction protocol when a bot detects high levels of uncertainty in the inferences. This reduced the system error rate by 30%.
 - Single-handedly built a Knowledge Management Tool using ReactJs and Python FastAPI, that allows creation and curation of real-world knowledge and visualization of data using JSON-Graphs.
 - Designed Inter-Bot communication endpoints using RabbitMQ and composed database schema, SQL scripts and RESTful APIs in Java for request life-cycle tracing.
- **Intern - Software Engineer (AI)** Jun 2020 - Dec 2020
Cere Labs Pvt. Ltd. *Mumbai, India*
 - Programmed a web-scrapper using BeautifulSoup for extraction and classification of Indian companies using Bayesian Probabilistic Models.
 - Designed and coded a chat-bot with an aesthetic JavaScript front-end that lets users add and curate real-world knowledge using Neo4J graph database and also execute programs on click of notifications.
 - Took initiative to develop a Bounding-Box web application which helped reduce data annotation time by 50%.

PROJECTS

- **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 AI 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:** A computer vision and AI based game of sticks("Chopsticks") implemented using PyGame library. The game uses ResNet Models for hand detection and finger classification and MiniMax algorithm for CPU decisions.
- **ListenUp:** A counseling website developed using HTML, CSS, Javascript, PHP and MySQL that provides an appointment scheduling portal and features a mental-health blog.

PROGRAMMING SKILLS

- **Languages:** Python, Java, Javascript, SQL, HTML, CSS
- **Libraries/Frameworks/Utilities:** Spring Boot, ReactJs, RabbitMQ, FastAPI, Flask, Tensorflow, Pytorch, Matplotlib, Numpy, Pandas, Spacy, NLTK, Docker, git, SVN.
- **Databases:** MySQL, Redis