

Padmini Gopinath

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EDUCATION:

Bachelor of Science: Computer Science - Data Science Track

Expected Graduation: May 2025

Double Major: Economics

University of Maryland, College Park

Key Courses:

Algorithms, Organization of Programming Languages (Ruby, Regex, Ocaml, Rust), Object-Oriented Programming (Java), Data Structures, Computer Systems (C, Assembly, UNIX), Discrete Structures, Linear Algebra, Calculus, Microeconomic Analysis, Macroeconomics Analysis, Methods & Tools for Economic Analysis (MATLAB), Economic Statistics (STATA, R), Data Science, Database Design

EXPERIENCE:

Sustainability Analytics Research Intern

(May 2023 - Present)

- Supervised by Dr. Thanicha Ruangmas. Performed a comparative study on marginal emissions & damages from electric vs gasoline vehicles in the US.
- Improved the APX model used in previous studies by using new atmospheric models and updated 2020 emission data from the National Emissions Inventory.
- Used R (tidyverse, TERRA, etc.) to work with various dataframes. Calculated marginal cents/mile damages for each pollutant (NOx, SO2). Modeled results by creating tables, graphs, and maps to detail NOx and SO2 emissions for different interconnections (NERC) in the US.

PROJECTS: [\(implementation available upon request\)](#)

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- Designed and Implemented several Java projects. Some interesting projects include ***Dijkstra's Algorithm, Clear Cell Game, Orders Processor, & Interest Table***. Extensively used data structure principles and advanced Java concepts.
 - ***Shell Sr:*** Wrote a process based shell program in C which uses background utilities to support various Linux commands including those with boolean operations, file redirection, and pipes
 - ***Translator:*** Wrote a translator in Ruby that translates various languages. Gained experience with Regex.
 - ***Interpreter:*** Implemented Mutoy, an interpreter. Wrote lexer, parser, & evaluator in Ocaml
 - ***Investment Portfolio:*** Matlab economic-based project that analyzes stock returns and optimizes shares for maximum expected returns for Amazon, Edward LifeSciences Corp, and Biogen Inc.

SKILLS:

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- Proficient in Java, R, C, Assembly, Ruby, Ocaml, Rust
 - Comfortable with Matlab, STATA, Excel and data analysis techniques
 - Excellent written and verbal communication skills
 - Strong problem solving & analytical skills w/ great ability to work in a team environment
 - Thorough understanding of economic principles and their practical use
 - Languages: English, Tamil, and French