Dharmik Patel

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Education

Rutgers University • *New Brunswick* • *Expected: Spring 2025*
‣ Bachelor of Science in **Computer Science**
‣ Cumulative GPA: **3.89/4.00,** Major GPA: **4.00/4.00**
Relevant Coursework: Data Structures, Computer Architecture, Discrete Structures I, Mobile App Development

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Projects

AI Learns to Play Pacman
‣ Used Unity 3D to make a 3D version of Pacman and visualize training models with TensorBoard
‣ Trained 10 models with reinforcement learning and curriculum learning using the ML Agents library on
  different combinations of input parameters and reward systems
‣ Achieved a final model trained in ~2 hours with a 100% win ratio
‣ Input parameters: 10x10 grid sensor of surrounding, number of pellets left, distance to closet pellet
‣ Reward system: (max time – time taken) points for eating a pellet, (-max time) points for eating no pellets
‣ *Unity 3D, C#, TensorBoard, ML Agents*

Attendance Bot
‣ Automated attendance data transfer from Google Sheets to the BAPS Charites' data management system
‣ 20 new youth centers began to report weekly data due to the streamline functionality of the bot
‣ Increased weekly data collection by ~90% over 1 year (25 weeks to 49 weeks of data collected)
‣ *JavaScript, HTML, Google Sheets API*

Superlist
‣ Combination of a Queue, Stack, and ArrayList in one data structure built on a Linked List
‣ All methods have an O(1) or O(n) time efficiency just like the Java Standard Library
‣ Constructed the Superlist class with generics so users can specify variable types during initialization
‣ *Java, Generics, Data Structures, Object Oriented Design*

Other Projects
‣ Fractal visualizer, Sound board GUI, Photo to ASCII Art, Prank Bot Android App, Landmark Detection Android
  App, Productivity Messenger Bot, Class Scheduler, Maze Solver, Unbeatable Tic Tac Toe, Twitter Sentiment
  Analysis
‣ *Java, Python, C, C#, Hashtables, Unity 3D, Android Studio, Java Swing, Jupyter Notebook, Pandas, Numpy*

Leadership

BAPS Charities • *Regional Project Manager* • *September 2021 – Present*
‣ Lead a team of 5 to create multimedia content for bi-annual conventions attracting ~4000 delegates
‣ Created a Productivity Messenger Bot, used by 25 colleagues, that sent their tasks from the Todoist
  App to Telegram every 3 hours
‣ Manage and report incoming donations of ~$2000 dollars annually using Microsoft Excel
‣ Speak at weekly assemblies for ~140 youths
‣ Scripted and made weekly 45 minutes animated videos broadcasted national on YouTube; viewed
  by ~5000 youths during the COVID-19 pandemic

Experience

Rutgers Computer Labs • *IT Consultant* • *September 2021 – Present*
‣ Analyze and troubleshoot patrons' problems on personal devices
‣ Provide instructional technical support to professors relating to the classroom

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Skills & Interests

Languages: Java • C# • Python • C • JavaScript • HTML • CSS
Libraries: Java Swing, ML Agents, NumPy, Pandas, Pygame, Yahoo Finance API, Cron
Software: Unity 3D, Android Studio, Linux, Jupyter Notebook, Excel, MATLAB, Photoshop, After Effects
Interests: Graphic Design, Photograph, Video Editing, Volunteering