Yathirajan Manavalan

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Professional Summary

A software developer with 8+ years of experience building performant and robust web applications with insight into the loyalty and finance industries and payment systems. Vim and Dvorak user and a lifelong learner.

- Ruby on Rails, Typescript, React, EmberJS
- Enthusiastic about functional programming paradigms and dabbled with Haskell and Elixir. Currently learning Rust.
- Strong knowledge of OO principles and design patterns
- Extensive troubleshooting and debugging skills
- Excellent mentorship and leadership skills

Experience

May-2022 – May-2023

Developer, SHOPIFY, Remote

- Built integrations to services in different countries to verify merchant identity and detect fraudulent ones.
- Worked with Shopify Payments to build consumers for stripe webhooks.
- Improved type safety within the merchant profile systems and wrote DSL compilers to generate type signatures for internal gems that did not have type signatures.

Technologies Used: Ruby on Rails, Sorbet, Typescript, React

Mar-2016 – Apr-2022

Senior Full Stack Developer, REWARDOPS, Toronto, ON

- Architected and implemented numerous features for the Reward management system used by program managers at RewardOps and its clients
- Was an integral part of various program launches including Aeroplan, Airmiles and US Bank Rewards and implemented an asynchronous event driven order placement flow which considerably sped up the order creation speeds and API response times.
- Rearchitected and improved the order refund and cancellation system using event-sourcing techniques
- Implemented a filter string parser as an open-source JS library. This library is capable of recursively parsing filter definitions with different combinations of conditions and it also has methods to update the filter strings. (https://github.com/rewardops/javascript-filter-parser)
- Built third party integrations with many of RewardOps's clients and suppliers
- Optimized the memory efficiency of the reporting system which drastically reduced the memory load on the servers
- Took charge in conducting lunch and learns and improving documentation
- Onboarded and trained many new hires and brought them upto speed.

Technologies Used: Ruby on Rails, PostgreSQL, Typescript, React, EmberJS

2010–2013   **Java Developer**, Tata Consultancy Services, Chennai
  ○ Built the MoneyGram-PayPal integration
  ○ Was part of a major technology platform upgrade within MoneyGram
  ○ Interacted with various clients and guided them through the upgrade process

  Technologies Used: Java, Javascript, jQuery, SVN

Education

2013–2015   **Master of Science, Computing Science**, *University of Alberta*, Edmonton

2006–2010   **Bachelor of Engineering, Electronics and Communication Engineering**, *Anna University*, Chennai

Masters Thesis

Title   *A Light-weight AI emotion model for NPCs in a video game*

Supervisors   Professor Vadim Bulitko

Description   This thesis explored the idea that basing NPC actions on a simulated emotion model based on fear, greed, happiness and sorrow would lead to more organic NPC reactions to player actions in a video game.

Interests

Photography   https://500px.com/p/thunderemperor

Video Games   Regular: DotA. Currently playing Elden Ring and Hollow Knight

NeoVim   Love tinkering with it and trying to get better.

Publications

[1] Yathirajan Manavalan, Vadim Bulitko, and Marcia Spetch. A lightweight algorithm for procedural generation of emotionally affected behavior and appearance. *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*, 11:142–148, Jun. 2021.

[2] Yathirajan Brammadesam Manavalan and Vadim Bulitko. Appraisal of emotions from resources. In *Interactive Storytelling*, pages 224–227. Springer International Publishing, 2014.