Gnanavel Premnath

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EDUCATION

- **Simon Fraser University** Burnaby, BC
  Bachelor of Science in Computing Science *Sept. 2020 – July. 2025 (expected)*

TECHNICAL SKILLS

- **Languages:** Python, C, C++, Java, HTML, CSS, TypeScript, JavaScript, SQL, PHP, Matlab
- **Frameworks/Tools:** Angular, React, NextJS, NodeJS, Express, MongoDB, Tailwind CSS
- **Others:** Git, Google Cloud, AWS, LaTex, Notion, Figma, Adobe Softwares

PROJECTS

ChatGPT Clone | PremGPT **AWS, MySQL, OpenAI API**
Flask and NextJS *Nov. 2023*

- Designed and implemented **ChatGPT** clone using **Flask** and **GPT-4 OpenAI API.**
- Engineered the application to support **multiple chat sessions**, **seamless browsing** between sessions, and **real-time interaction** with the AI model.
- Utilized **LangChain** to **fine-tune** the GPT-4 model, enabling the AI to dynamically learn and generate responses from newly added information.
- Applied **Next.js** for robust server-side rendering and **Tailwind CSS** for responsive design in user interface development.
- Employed **MySQL** for data handling and storage, and hosted the application on **AWS**, ensuring consistent performance.

Fullstack Web Development | TubeTalk **MEAN, TMDB API, GCP**
Multimedia Review Platform *Sept. 2022*

- Designed and deployed a multimedia review platform with **MEAN stack** to enhance user engagement with movie and TV show critiques.
- Integrated **TMDb API** with **Node.js** for data retrieval on movies/TV shows and created tag-based user searches for specific genres.
- Implemented **JWT** for user authentication and utilized **CRUD** operations for user management in **MongoDB.**
- Hosted the application to **GCP** (Google Cloud Platform) to ensure robust and scalable performance.

2d Arcade Game | Spirit Experiment **Java, Maven, Junit, Junit.jupiter**
Group Project (Software Development) *Sept. 2021*

- **Led** a team of four in the creation of a **2D arcade game**, utilizing **Java Swing** and **Graphics2D** to craft a visually engaging and responsive game engine.
- Structured a modular entity system using **polymorphism** and **inheritance**, with advanced **collision detection** for dynamic and static entities.
- Leveraged **JUNIT** and **junit.jupiter** for comprehensive **unit testing**, validating game logic and mechanics, and ensuring a bug-free gaming experience for users.
- Employed **Agile Scrum techniques** such as sprint planning, daily stand-ups, and retrospectives to manage the project, resulting in efficient workflow.

RELEVANT COURSE WORK

- Data Structures
- Algorithm Analysis
- Discrete Mathematics
- Database Management
- UI/UX design
- Software Methodology
- Computer Architecture
- System Programming