Gopal Othayoth

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CAREER OBJECTIVE

The elegant complexity of computers fascinates me - billions of individual parts working in tandem toward a common goal. Software is a great equalizer for human advancement, offering opportunities for limitless learning and growth. Almost anyone with a device and freely available information can learn how to create something that has a lasting impact on the world. My goal is to lead a business that develops game-changing technological innovations that benefit all individuals and improves communities.

COMPUTER SCIENCE ACTIVITIES

HP Inc., *Software Developer*   40 hrs/wk Sophomore
- Worked on a confidential project
- Designed and developed customer-facing UIs using both frontend and backend technologies such as React, TypeScript, Node.js, and Go
- Created a backend that interfaces with a Linux system to perform certain system calls and actions
- Developed tools to ease software testing using Node.js and Bash

HP Inc., *Software Developer*   40 hrs/wk Junior
- Worked on HP Workforce Experience Platform (formerly HP WEX)
- Designed and developed customer-facing UIs using frontend technologies such as React, TypeScript, and Node.js
- Created a dashboard for customers to easily activate and manage integrations with third-party services
- Orchestrated work sessions with external partner companies to coordinate integration efforts

Software development and design (personal), *Software Developer*   2 hrs/wk 9-ongoing
- Designed, developed, and deployed Software R&D knowledge website (https://cerebraldatabank.neocities.org/) with more than a quarter million views focused on:
    - Languages: HTML, CSS, JavaScript, C++, C, TI-BASIC, Lua (Code samples, utility programs)
    - Online game programming and design (The Platformer, Adventure Shell, Desktop Simulator, Internus Virum etc.). All games run within a browser and do not require installation. Some have been featured in compilations from other site owners on the Neocities network.
    - Complete web-based OS/desktop environment (GopalOS). Zero-installation, lightweight web-based desktop environment with optional persistent filesystem backed by browser storage. Contains everything from simple programs (File Manager, Text Editor) to more advanced ones (Assembly Emulator, Graphing Calculator).
    - Coding samples, references, and CSS class library (GOGO CSS), TI-84 Plus CE calculator programs
- Developed a GUI editor for building complex colored terminal prompts (CLI Prompt Builder, https://cerebraldatabank.neocities.org/utilities/cli-prompt-builder)
- Developed open-source Node.js-based video downloader tool (Gopal's Video Downloader, https://gopal-video-downloader.herokuapp.com/). This utility is able to capture, format, and download network media streams and is capable of handling multiple formats. This project is currently migrating hosting providers; the source code is available at https://github.com/CerebralDatabank/gopal-video-downloader.
- Created several programs for the sandbox game Garry's Mod using Lua, Expression 2, HTML/CSS/JS, and the assembly language HL-ZASM
- Created a simple, modern Travel Planner for the HowdyHack 2022 hackathon at https://travel-hh2022.neocities.org/
- Contributed code and documentation to numerous open-source projects on GitHub
    - GitHub profile (personal projects and open-source contributions): https://github.com/CerebralDatabank
    - Wrote the initial documentation for and contributed to the development of the Discord bot Karbon (GitHub: https://github.com/Karbon-Discord/Karbon). Karbon is a bot capable of everything from lotteries to battles that runs on the Discord platform.

- o Contributed to the development of the web-based desktop environment AaronOS (GitHub: https://github.com/MineAndCraft12/AaronOS). AaronOS is a complete web desktop environment with many commonly used applications already provisioned, and was one of the inspirations for me to create GopalOS as an independent desktop environment.
- o Provided consulting/assistance in legal document creation and other legal matters to Aaron, creator of the AaronOS project.

Liberty Park Homeowner's Association, *Developer*   2 hrs/wk 12
- Developed a complete website using responsive design (adaptive layout) for my local community homeowners' association including administration portal and announcement system (https://libertyparkhoa.endl.site/)
- Provide hosting, administration and technical support for the HOA website

Custom PC, *Builder*   3 hrs/wk 11-12
- Built custom productivity and gaming PCs for family, friends and neighbors
- Built numerous air and liquid cooling solutions for high-performance PCs

PopID (startup), *Research and Development*   2 hrs/wk 10-12
- Performed research and development in biometrics/facial recognition and programming
- Performed comparative benchmarking of biometric algorithms (ongoing)

Lewisville ISD IT, *Shadow*   6 hrs/wk 11
- Shadowed LISD IT services programmer to learn more about programming careers

VOLUNTEERING

FM^3, *Tutor*   2 hrs/wk 11-12
- Tutored high school math up to and including AP Calculus AB/BC

donate:code, *Volunteer Programmer*   1 hr/wk 11-12
- Volunteered to create websites or applications gratis to individuals or organizations upon request

Vanguard College Prep, *Administrative Assistant*   2 hrs/wk 10
- Performed test administration activities
- Analyzed student practice test scoring data and produced benchmark reports

Texas A&M University, *Tutor*
- Received a Gold Star award from Dr. Philip Ritchey for the unofficial assistance and tutoring I gave to other students.

EDUCATION

Texas A&M University (Present, Graduating May 2025)   Class of 2025
- Pursuing BS in Computer Science, Honors
- Software development & engineering courses taken:

Course	Credit Hours
ENGR 102 Engineering Lab I – Computation	2 credit hours
CSCE 121 Introduction to Program Design and Concepts	4 credit hours
CSCE 222 Discrete Structures for Computing	3 credit hours
MATH 151 Engineering Mathematics I	4 credit hours
MATH 251 Engineering Mathematics III	3 credit hours
CSCE 221 Data Structures and Algorithms	4 credit hours
CSCE 312 Computer Organization	4 credit hours
CSCE 314 Programming Languages	3 credit hours
MATH 304 Linear Algebra	3 credit hours
CSCE 313 (Honors) Introduction to Computer Systems	4 credit hours
CSCE 315 Programming Studio	3 credit hours

- ○ MATH 308 Differential Equations — 3 credit hours
- ○ CSCE 410 Operating Systems — 3 credit hours
- ○ CSCE 411 Design and Analysis of Algorithms — 3 credit hours
- ○ CSCE 421 Machine Learning — 3 credit hours
- ○ CSCE 441 (Honors) Computer Graphics — 3 credit hours
- ○ CSCE 430 Problem Solving Programming Strategies — 3 credit hours
- ○ CSCE 431 Software Engineering — 3 credit hours

Flower Mound High School (CEEB - 442434)   Class of 2021
- GPA: 4.569 (weighted)
- ACT: 36
- PSAT: 1460 (99th percentile)
- AP courses and credits: Computer Science (5), Biology (4), Chemistry (4), Calculus BC (4), English Language and Composition (4), English Literature and Composition (4), Physics (4), Statistics (4), Spanish Language and Culture (4), Spanish Literature and Culture (4)
- SAT II: Math Level II (770), Chemistry (740), Spanish (700)

HONORS AND AWARDS

Winner at TAMU Datathon 2023   Fall 2023

TAMU College of Engineering Dean's Honor Roll   Fall 2021

Honor Roll   (grade) 9, 11

College Board AP Scholar with Distinction   10-12

National Honor Society Member   11-12

Gifted & Talented Program   9-12

National Merit Commended Scholar   12

COMPUTER SCIENCE SKILLS AND CERTIFICATIONS

Programming Languages:
- Knowledge of and experience with HTML, CSS, JavaScript, Node.js, C++, Java, Python

Certifications
- Passed TestDome HTML/CSS/JS test, ranking in the top 10% (https://www.testdome.com/cert/04bc7bab86aa4420964a4a018fe41178)
- Passed TestDome JavaScript test, ranking in the top 10% (https://www.testdome.com/cert/d1aa28dd91c04a0b84264c7f762fe09b)
- Passed TestDome Network Administration test, ranking in the top 10% (https://www.testdome.com/cert/4321c8531ef44fbeb1f092d31b73c20f)
- Passed TestDome Administrative Assistant test, ranking in the top 25% (https://www.testdome.com/cert/28d9eb58028446278f21f91dec88f6d0)
- Passed TestDome Java test, ranking in the top 10%
- (https://www.testdome.com/cert/75aea60b676c4714a883071f320a7539)
- Completed the following courses on SoloLearn: CSS Fundamentals, JavaScript tutorial, and HTML Fundamentals

OTHER

High school swim team, *Member*   2 hrs/wk 10
- Member of the FMHS competitive swim team

- Participated in local and regional North Texas competitive swim meets and events

Local music class band, *Drummer* 1 hrs/wk 10
- Hobbyist drummer, solo and band