PRANAV OSWIN KALYAN

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SKILLS

Programming Languages: Python, JAVA, C, Assembly, MATLAB, ASP.NET, C#

Database Technologies: SQL Server, MongoDB, Oracle, Amazon RDS, Snowflake

Specializations/Interests: Cloud Computing (AWS), Machine learning, Optimization, Data Structure, UI Design

Certifications: Microsoft Certified Technology Specialist in ASP.net

PROFESSIONAL EXPERIENCE

Elevance Health (Software Developer II) **August 2022 – Till Date**

- Ensured data quality for millions of patient records across RDS (Snowflake and Oracle) and Doc DB
- Coordinated the automation of Medicare and Member collection daily quality checks across teams
- Managed AWS tools such as EMR, Lambda, and S3 to execute Pyspark scripts
- Optimized queries in Snowflake and Oracle to cut down runtime by over 80 percent

Agoura Math Circle – (Founder and President) **Sep 2015 – Till Date**

- Created the infrastructure for organization to continuously expand and adapt through COVID 19
- Developed the core program which manages student records and all-important documentation
- Collaborated with the design team to create the web and mobile application, UI and all organization logos and designs

EDUCATION

UC Berkeley, Regents Scholar - Bachelor of Computer Science **May 2022**

Relevant Coursework: Machine Learning, Artificial Intelligence, Fundamental Computer Architecture Design, Algorithm Analysis, Unsolvable and Intractable Problems, Large Database Systems, Declarative Logic, Cryptography, Operating Systems, User Interfaces

Moorpark College, phi theta kappa honor society, Honor Student **Dec 2019**

Associate Degrees in **Mathematics**, **Science**, **Economics**, **Humanity**, **History**, and **Social Behavior**

RESEARCH

John Wayne Cancer Institute – (Equally Contributing Author) **May 2018 – Aug 2018**

- Researched and drafted a review article encompassing the development and the use of nanoparticles to more effectively deliver cancer fighting drugs. Examined and interpreted the data from 23 out of the 100 research articles cited in the paper and expedited the process of writing the article by discovering 15 other relevant articles
- Lipid-Polymer Hybrid Nanoparticles as Next Generation Drug Delivery Platform: State of the Art, Emerging Technologies and Perspectives published by National Library of Medicine in March 2019.

PROJECTS

Bookle (Java, Android Studio, Firebase) **Apr 2022**

- Collaborated with a group of 4 to deliver a unique app which delivers a daily excerpt from a book to users
- Coordinated most group meetings and led the group along multiple phases of user testing using different methods of gathering user input at each level
- Exceeded project requirements by including future functionality by using Firebase to upload future readings

Dynamic Programming Solver (Python) **Dec 2021**

- Utilized dynamic programming along with other greedy algorithms to optimize a massive task scheduling problem
- Experimented with numerous heuristics until a consistent close to optimal solution was found
- Devised many test cases to try to take advantage of the weaknesses of program and other edge cases

NumC (C) **Dec 2021**

- Optimized matrix operations by taking advantage of parallelism and intrinsic functions
- Achieved 600 times speed up compared to a naïve implantation of the power operation through simd
- Utilized these optimizations in my own machine learning script in C

CPU (Logism) **Oct 2021**

- Built a CPU out of virtual circuits with limited components (basic logic gates and multiplexors)
  - Included all registers with capacity to execute all basic assembly commands and translate 32 bits binary to assembly

PStudyWare (C#, ASP.NET, SQL Server, JavaScript) **Sep 2013**

- Created the infrastructure to manage students' registration, exams, report cards, volunteer activities, and all other documentation for Agoura Math Circle.
- Built in security tiers for not only students but also different levels of access for volunteers, admins, and parents