Prathik Anand Krishnan

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Technical Skills

Languages: C++, Python, JavaScript, HTML/CSS
Technologies/Frameworks: MFC, Catch2, Google Test, React, Node.js, Tailwind
Developer Tools: Git, VS Code, Visual Studio, Github, Azure, Eclipse
Database: SQLite, MySQL, MongoDB

Experience

ARUP Sep 2022 – Present
Software Developer - G3 *Bangalore*

- Worked on **two C++** feature development for **Oasys - GSA** Finite Element Analysis Structural Software
- Working on **backend MFC C++ APIs** and have delivered around **60+ JIRA tickets** with **97%** code-coverage
- Utilized Test-Driven Development (TDD) with **Catch2 and Google test frameworks** to design robust, reusable, and reliable code
- Developed the **front-end** for sidebars and dialog boxes using**Vue 3, HTML/CSS and JS**

ATKINS Jan 2018 – Aug 2022
Assistant Engineer *Bangalore*

- **Python + Tkinter tool** to draw, analyse and show results of Retaining Walls, had a adoption rate of **70%**
- **Astrid tool (HTML/CSS)** - Was part of the QA/QC team, reported around 7 critical bugs and improved UI
- **RMS Project Management Interface PowerBI Tool** - Improved overall project efficiency by **40%**

Education

Birla Institute of Science and Technology Hyderabad, India
Master of Structural Engineering *Aug. 2018 – July 2020*

Amrita Vishwa Vidhyapeetham Coimbatore, India
B.Tech in Civil Engineering *Aug. 2013 – July 2017*

Certificates

- Mastering critical C++17 skills
- Harvard CS50 - Free Computer Science University Course
- Programming with JavaScript
- Advanced React Concepts

Projects

VanillaVision: Twin Pricing Engine | *C++14* | August 2024

- Utilized Modern C++ for developing the core logic of input parameters
- Implemented lock-free data structure for Twin pricing engine
- Leverages Multi-threading to speed up the Monte Carlo simulation

ConcurrentCandle: Trading Orderbook Simulation Suite | *C++14* | June 2024

- Built with Modern C++ and supports Market, Limit, and Stop orders
- Simulates random order generation to mimic real-time trading activity.
- Leverages the power of multi-threading to process orders in parallel

Black-Scholes Option Pricing Model Web App | *Python, HTML/CSS* | August 2024

- Crafted with HTML/CSS, seamlessly integrated into Python, utilizing powerful libraries including NumPy, Streamlit, Matplotlib, and Seaborn.
- Displays both Call and Put option prices using an interactive heat-maps
- The dashboard allows real-time updates to the Black-Scholes model parameters

My personal portfolio Web App | *React, JavaScript, HTML/CSS* | September 2024

- A detailed overview of my roles and responsibilities in software development using responsive design
- The web app is hosted on GitHub Pages and leverages automatic deployment through GitHub Actions