Royce Arockiasamy

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
Junior, BS in Computer Science, Minor in Mathematics, GPA: 4.0/4.0   *May 2021 – May 2025*

South Forsyth High School   Cumming, GA
Class Rank: 1 of 597, Varsity Tennis, VEX Robotics Worlds Qualifier, Musician, National Beta Scholarship Recipient, Co-Captain of Science Olympiad, Governors Honors Program Finalist, Published Scientific Researcher, Presented at SCUDEM EXPO Conference, First Place at Technology Student Association (TSA) National Conference, USACO Platinum

EXPERIENCE

Data Scientist   May 2023 - Present
RightData   *Atlanta, GA*
- Optimized search engine for global search using AI langchain-based vector embedding search functionality with Neo4j.
- Helped develop SaaS Control Plane platform using React, Nile, and Pulumi (spinning instances in AWS, Azure, and GCP).
- Developed novel algorithm for Emory Healthcare client using Amazon Textract that extracts data from any page matching a geometric template, regardless of page orientation, resolution, or scanned position.
- Developed lineage for data products across source and targets for data governance using pipelines.

Mobile Application Developer   Summer 2022
International Child Art Foundation   *Washington, D.C.*
- Collaboration with UX and management teams to design and develop a mobile application to save event dates and information for the World's Children Festival.

DevOps & SWE Intern   Summer 2021
Meals by Grace   *Atlanta, GA*
- Used AWS to develop an Inventory Management system.
- Built a working Transactions system that allows staff to add/edit/delete items, containers, and storage locations.
- Developed a forecasting tool using charts & graphs to graphically represent inventory data.

A FEW PROJECTS

Real-time 3D Visualization Technology | *Python, C++, COLMAP, Firebase, Docker, AWS ECS, WebGL, React*
- Built novel technology that runs on the web brower and converts a real-time video into 3D
- Uses spatial mapping (quaternions and translation vectors) through sparse reconstruction techniques and 3D Gaussian Splatting to develop a model that is rendered via WebGL.
- Set up RTX 6000 to run the ML Model across containerization on AWS with optimization through high performance computing. Database handled through Firebase Cloud Storage with frontend integration on React.

Online HedgeFund + Marketplace | *Python, Azure SQL Database, React*
- Built technology (does not exist in the market) that manages clients' broker accounts through automated quant algorithms
- Financial Marketplace platform where traders/quants can post algorithms and run any algorithm(s) on trades. Supports backtesting as well.
- Project almost complete. Release scheduled around end of 2023.

Schematic Optimization of PCB | *C++, Boost, MATLAB*
- Research project implementation that optimizes the schematic intersections on a PCB (Printed Circuit Board)
- Used C++ to develop and code planar embedding and possibility exclusion algorithms to produce optimized PCB models

Beta Club Website | *Node.JS, Cloud APIs, HTML/CSS/JavaScript, GitHub APIs, SEO Management*
- Serving over 1000+ members
- Frontend website showcasing the club, volunteering opportunities, etc with compatibility on all devices
- Backend using a database to log attendance and track hour submissions with an admin portal to approve/reject statuses

CERTIFICATIONS

TestOut PC Pro Certification | *Hardware, Software, Security, and Troubleshooting*   Issued 2022
Programming in HTML5 with JavaScript and CSS3 | *Frontend and Backend Web Development*   Issued 2019

SKILLS

Languages: English, Spanish, Tamil, Hindi
Technical Languages: Java, Python, C/C++, SQL, HTML/CSS/JS, PHP, Bash, C#, Swift, Go, TypeScript, MATLAB
Technologies: React, Angular, TensorFlow, Node.js, Docker, SSH, Express, Flask, .NET, Flutter, Bootstrap, Material UI
Tools: Git, AWS, Google Cloud, Azure, Firebase, Neo4j, Android Studio, Visual Studio, IntelliJ IDEA, PyCharm, Pulumi