Shubham Malhotra

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EDUCATION

ROCHESTER INSTITUTE OF TECHNOLOGY (RIT)   Rochester, NY
Bachelor of Science: Software Engineering (GPA: 3.60/4)   *August 2017 - May 2022*
Dean's List | **Relevant Coursework**: Data Structures, Algorithms, Subsystem Design, Compiler theory, Web and Mobile Development, Data Management,Microprocessor and Microcontrollers, Computer Architecture

WORK EXPERIENCE

AMAZON AWS - SOFTWARE DEVELOPER   NOV 2024 - PRESENT
Seattle, WA
- *Implementing Re-balance notifications simulator for **EC2 Spot**, allowing us to predict the accuracy of different algorithms*
- *Using **athena** to query the aggregated dataset to visualize on **QuickSight Dashboards***
- *Technologies: Java, Typescript, AWS: CDK, Step Functions, IAM, Cognito, Lambda, Quicksight, Glue*

MICROSOFT AZURE - SOFTWARE DEVELOPER   JUNE 2022 - NOV 2024
New York, NY
- *Implemented Daily Releases for the extensions, using **Azure ARC and DevOps**, providing **1 million** extension install requests weekly*
- *Developed a distributed automation tool with **Azure Container Instances** for testing and deployments, optimizing resource usage*
- *Engineered and deployed **Powershell** scripts with **Azure Function Apps** for infrastructure setup and testing automation*
- *Integrated **heat maps** for visual monitoring, configured monitors for accuracy, and optimized log flow for efficiency*
- *Built tool using **Geneva Framework** to remove bad version of extension from the allowlist*
- *Re-engineered the existing feature, to include all the major.minor versions of extensions available to customers*
- *Interacted with the service and Agent to add **Agent Auto Upgrade** functionality for the onboarded machines*
- *Developed **Azure DevOps pipeline** geographically using Ev2 rollout spec, auto upgrading all the onboarded machines to latest version*
- *Created **Restful API's** to auto upgrade the machines onboarded to Azure*
- *Technologies: C#, ASP.NET, Powershell, Swagger, Azure, Geneva Action*

AMAZON AWS - SOFTWARE DEVELOPER CO-OP   AUGUST 2021 - DECEMBER 2021
Seattle, WA
- *Implemented an **OPS** tool using **AWS services** for **AWS Panorama***
- *Built features to debug application or device flow, optimizing the human errors*
- *Validated the **metadata** in to meaningful manner on the **UI***
- *Authenticated the API's using **Cognito** whereas **Midway Authentication** in case of application*
- *Technologies: Python, React, AWS : S3, Amplify, Lambda, Api Gateway, Dynamo DB, IAM, Cognito*

SALESFORCE - SOFTWARE ENGINEERING INTERN   JUNE 2021 - AUGUST 2021
San Francisco, CA
- *Built the features of Salesforce core **Customer Data Platform***
- *Re-engineered the existing feature to enable the flow for **Streaming DMO's for data Action creation***
- *Implemented new **API's and custom lightning web components** for Calculated Insights*
- *Accelerated the work needed for the custom plug-in adapter for data cleansing tool, allowing **ETL transformations***
- *Technologies: JAVA, Springboot, JavaScript, Python, Soql*

LARGO CAPITAL - SOFTWARE DEVELOPER CO-OP   AUGUST 2020 - DECEMBER 2020
Buffalo, NY
- *Assisted technical team to enhance and upgrade, CREDIT, a proprietary **web-based system***
- *Worked on integration of 3rd party applications **API's** within the website*
- *Developed file sharing system with added permission for the folder level access and file level access*
- *Wrote Unit tests, covering the application, model, UI, and util tiers, achieving more than 85% code coverage*
- *Refactored the code with the incorporation of Design Principles*
- *Technologies: Laravel-PHP,Postgres-SQL, Eloquent-ORM, Docker, Twig, Phinx, Slim*

SKILLS

- ***Programming Languages:** Java, C#, C/C++, Python, PHP, PS*
- ***Web technologies:** JavaScript, React.js, Django, Laravel, Node.js, HTML, CSS, Bootstrap, jQuery*
- ***Databases:** MongoDB, MySQL, PostgreSQL, DynamoDB, Cosmos DB*
- ***Cloud Computing & DevOps:** AWS, Azure, Docker, Kubernetes, CI/CD Pipelines, Git, JUnit, Mockito*
- ***AI/ML & Other Technologies:** OpenAI GPT APIs, Arduino*

PROJECTS

SALES SIMULATION   JANUARY 2024 - MARCH 2024
• *Designed and developed a sales simulation platform leveraging **OpenAI API**, enabling automated customer-agent interactions with conversational AI*
• *Bootstrapped using **React.js** for a dynamic front-end, **Flask** for the back-end API layer, and deployed on **AWS** to ensure scalability and reliability*
• *Implemented **real-time conversation analysis, and predictive analytics** for sales pitch*

SCAN WRITING   JANUARY 2022 - MAY 2022
• *Allowing customers to be able to upload handwritten notes on the. system using **AWS textract**.*
• *Authenticating the user using **Google OAuth and AWS Cognito**, to be able to access the application.*
• *Notes are stored **in dynamo db** to perform **CRUD** operation and provide ability to share among different users.*

TEXT COMPRESSION SYSTEM   JANUARY 2020 - MAY 2020
• *Implemented an **algorithm** which could **compress** and **decompress** the text files using **Python***
• *Implemented **data compression** and **entropy encoding** techniques in the algorithm, reducing size by almost half with a **ratio of 2:1***

MEMBERSHIPS

TECHNOLOGY PRACTITIONER COUNCIL MEMBER, VATION VENTURES   OCTOBER 2024 - PRESENT
• *The Technology Practitioner Council is an **exclusive and professional community** dedicated to fostering a **knowledge-sharing ecosystem, innovation, and resource accessibility** for IT professionals. Designed for progressive IT managers and directors, this council spearheads efforts to stay aligned with the swiftly changing technology landscape*

MEMBER, GROWTH HACKERS   OCTOBER 2024 - PRESENT
• *Ideal for **founders, heads of growth, marketers, product managers, and innovators** who want to share experiences and collaborate for business growth and career development*

JUDGING

BIG INNOVATION AWARD NOMINATIONS

• *Selected as an **industry expert** to evaluate and recognize groundbreaking innovations and achievements in business and technology*

OPEN SOURCE AI HACKATHON #12 - AI AGENTS

• *Assessed **AI applications** built on **LLMs**, selecting top projects and providing feedback*

MEDIA COVERAGE

SHUBHAM MALHOTRA: DRIVING INNOVATION IN SOFTWARE DEVELOPMENT WITH CREATIVE APPLICATIONS OF TECHNOLOGY

SHUBHAM MALHOTRA: LOOKING AHEAD WITH VISIONARY SOFTWARE SOLUTIONS

SHOULD YOU BE IN TECH? SHUBHAM MALHOTRA ANSHWERS QUESTIONS ABOUT THE INDUSTRY

SCHOLARLY ARTICLES

PLATFORM ENGINEERING: A STRATEGIC RESPONSE TO THE GROWING COMPLEXITY OF MODERN SOFTWARE ARCHITECTURES

BEYOND MICROSERVICES: WHY PLATFORM ENGINEERING IS THE KEY TO FUTURE-PROOFING SOFTWARE ARCHITECTURES

THE FUTURE OF CLOUD AUTOMATION: WHY RESTFUL API's ARE KEY TO SEAMLESS UPGRADES

A REVIEW AT STORAGE SYSTEMS AND PIPELINING