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Deepan Chakravarthy

[\[GitHub\]](#) - [\[LinkedIn\]](#) - [\[Portfolio\]](#)

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EDUCATION

Vancouver, BC	University of British Columbia	Expected May, 2024
<ul style="list-style-type: none">• Major: Computer Engineering, BASc (GPA: 82%)• Programming Coursework: Algorithms & Data Structures, Operating Systems, Networks, Computer Vision• Hardware Coursework: Digital System Design, Microcomputers, Embedded Systems, Assembly, Circuits		

TECHNICAL SKILLS

- **Languages:** C#, C/C++, Java, Python, Verilog, ARM/x86 Assembly, HTML/CSS/JavaScript
- **Frameworks:** .NET 5, ASP.NET Core, MVC, SQL Server, Entity, MongoDB, TensorFlow, Pytorch, React
- **Technologies:** GIT, Unix, Docker, Kubernetes, Azure Cloud, Postman, xUnit, Jenkins

TECHNICAL EXPERIENCE

Image Recognition Team	AgroBot UBC	August 2021 - Present
<ul style="list-style-type: none">• Performed Transfer learning to develop a wheat detection and classification model with 87% validation accuracy and 0.2 validation loss• Integrated the ML model onto an Edge device to increase real-time inference speed by up to 80%• Utilized: <u>TensorFlow</u>, <u>Coral Edge TPU</u>, <u>Python</u>, <u>OpenCV</u>, <u>GIT</u>, <u>Google Cloud</u>		

PROJECTS

UNIX commands REST API (Back-End)	February 2022 – March 2022
Personal Project [GitHub] – [DockerHub]	
<ul style="list-style-type: none">• Built a REST API that stores Unix commands and their descriptions• Used MongoDB, DTOs, and Asynchronous programming (Async all the way) for efficient data access• Used dependency injection and inversion of control principles to encapsulate data access and decouple controller from dependencies• Followed the Test Driven Development (TDD) approach and performed unit testing and regression testing using xUnit and Postman to validate code• Deployed using Docker and used Kubernetes to implement scaling of pods, self-healing, health probing and load balancing• Utilized: <u>C#</u>, <u>.NET 5</u>, <u>Async/await</u>, <u>RESTful APIs</u>, <u>Docker</u>, <u>Kubernetes</u>, <u>MongoDB</u>, <u>Postman</u>, <u>xUnit</u>	
Online Car Marketplace (Full-Stack)	January 2022 – February 2022
Personal Project [GitHub] – [Website]	
<ul style="list-style-type: none">• Built an ASP.NET Core MVC Web Application for users to advertise used cars• Used Entity Framework ORM (DbContext), Migrations, SQL Server for data storage and persistence• Created entire frontend UI using HTML/JavaScript and Bootstrap CSS templates• Implemented CRUD operations, added REST API endpoints using AutoMapper to improve performance• Added Authentication & Authorization (login system) and performed Client & Server-side Data Validation for security; Deployed SQL database and application to Azure Cloud to enable remote access• Utilized: <u>C#</u>, <u>ASP.NET Core</u>, <u>MVC</u>, <u>SQL</u>, <u>Entity</u>, <u>Azure</u>, <u>HTML/JavaScript</u>	
CI/CD Jenkins Pipeline	January 2022 – February 2022
Personal Project [GitHub] – [Website]	
<ul style="list-style-type: none">• Implemented CI/CD pipeline on an AWS ec2 Jenkins instance to automate building, testing and deployment• Automated static code quality checking using SonarQube and added deployment to a Nexus repo for releases• Utilized: <u>AWS ec2</u>, <u>Jenkins</u>, <u>Maven</u>, <u>SonarQube</u>, <u>Nexus</u>	
Crypto Currency Tracker (Front-End)	December 2021 – January 2022
Personal Project [GitHub] – [Website]	
<ul style="list-style-type: none">• Created and deployed website that tracks Cryptocurrency market trends with the Coin Gecko API using React• Utilized: <u>ReactJS</u>, <u>CSS</u>, <u>Hooks (State/Effect)</u>, <u>JavaScript</u>, <u>Azure Cloud</u>	

AWARDS & AFFILIATIONS

- Deans Honor List (2019, 2020), UBC BOLT data analytics club, UBC Game development club