

Abhinav Agarwal

CS Graduate student at University of Washington skilled in full stack development and machine learning, looking for Summer 2022 software development internships

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🎓 EDUCATION

Master of Science in Computer Science and Software Engineering, University of Washington
Expected Coursework: Machine Learning, Algorithm Design, and Analysis, Advanced Topics in Computer Vision, Evaluating Software Design, Software Management, Multimedia Database Systems

Sep 2021 – Apr 2023
Bothell, WA

Bachelors of Technology (Information Technology), Manipal Institute of Technology
Relevant Coursework: Data Structures, Distributed Systems, Operating Systems, Pattern Recognition, Big Data Analytics, Data Warehousing, Data Mining, and Advanced Calculus

Jul 2017 – Jul 2021
Manipal, India

💼 PROFESSIONAL EXPERIENCE

Graduate Student Research Project Member, Sponsored by Microsoft, Nvidia and UW
• Performing several studies to evaluate how *artificial intelligence* could be more *energy-efficient*.
• Centered around **Yolov4**, **BERT**, and **Turing-NLG** implemented in **Pytorch** and **ONNX**.

Apr 2021 – present
Seattle, WA, US

Software Development Engineer (SDE) Intern, ICICI Lombard
• Built *new APIs* for 5 different customer-facing **ASP.NET** applications using **SQL** database.
• Migrated a project with *multiple tables and procedures* from **MS SQL** to **Oracle SQL** Database.

Feb 2021 – Jul 2021
Mumbai, India

Summer Intern, Xu Labs, Carnegie Mellon University ☑
• Used *Parameter Pruning & Quantization* to reduce the size of a large and complex **Tensorflow** convolution neural network by 75% while preserving up to 70% of original accuracy.
• Built a *GUI web application* for exploration of MRC models using **Django** framework and *Metro UI*

Jul 2020 – Nov 2020
Remote

🗖️ LANGUAGES AND FRAMEWORKS EXPERIENCED IN

Programming
C, C++, C#, Java, MATLAB

Web Development
HTML, CSS, JavaScript, NodeJS, Nginx, Django

Machine Learning
R, Python, Tensorflow, Pytorch, ONNX

Databases
MS SQL, Oracle SQL, MySQL, MongoDB

📜 CERTIFICATES

Business Foundations Specialization ☑
By Wharton School of Business (online)

Deep Learning Specialization ☑
By deeplearning.ai

Data Science Specialization ☑
By Johns Hopkins University (Online)

Machine Learning for Trading ☑
By Google Cloud, New York Institute of Finance

📖 PUBLICATIONS

Dynamic Identification of Learning Styles in MOOC Environment Using Ontology Based Browser Extension, International Journal of Emerging Technologies in Learning (ijET) ☑
• Developed a Firefox browser extension that **scrapes** usage data from MOOC platforms.
• Built Using **NodeJS** running on free **GCP AppEngine**. Converts *JSON* data into *SQL* for storage
• Designed *Python scripts* to generate *recos* from the collected data by predicting **FSLSM** styles.

Jun 2021

(Under Review) Natural Language Query Formalization to SPARQL For Querying Knowledge Bases Using Rasa NLU Pipeline, Natural Language Semantics
• Designed an **NLP-based** conversational AI agent (*chatbot*) using **RASA NLU** and **Python** to query **OWL ontologies**. Converts plain English language queries into SPARQL queries.
• Built *scripts* to use RASA's internal testing suite and achieved up to 97% keyword accuracy.

Aug 2020

📁 SELECTED PROJECTS

Portfolio Website, Published a website using Gatsby/React.js on GitHub Pages ☑
• Deployed VM on Oracle Cloud with 4 **ARM** vCPUs and 24 GB RAM for hosting live demos.
• Installed Ubuntu, Node, Nginx, PM2, Mayavi, and NoMachine in an **AARCH64** environment.

Jun 2021

Facial Recognition Attendance System, Lightweight and browser based prototype ☑
• Uses Microsoft Azure APIs for face validation and **MongoDB** as the application database.

Mar 2020

Electronic Assessment System, Full-featured, production-ready and lightweight ☑
• Developed as per the **custom requirements** of my instructors at my undergrad college.
• Contains 20 **AJAX APIs** built using NodeJS **Express** and **Nginx**. Uses MySQL as the database.
• The frontend is built using *HTML5/CSS3* based Metro UI. Uses **Memcached** for session encryption.

Aug 2019