Abhinav Agarwal

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EDUCATION

University of Washington — Bothell, WA
Masters of Science in Computer Science & Software Engineering (GPA: 3.67/4) — *September 2021 – May 2023*

Manipal Institute of Technology — Manipal, India
Bachelor of Technology in Information Technology (GPA: 7.69/10) — *July 2017 – July 2021*

INDUSTRY EXPERIENCE

Graduate Research Assistant (Full Stack) — September 2022 – Present
University of Washington — *Bothell, WA*
- Working on wide field ethnography navigator: a React based tool to view multiple simultaneous streams of videos. The tool supports object detection in the multiple simultaneous video streams using Machine Learning
- Expected contribution of over 20,000 LoCs in React and Python, and an accompanying conference paper

Systems Software Engineer(Internship) — June 2022 – September 2022
Nvidia Graphics — *Remote*
- Worked as a Systems software Engineer (Intern) with the virtual GPU (vGPU) team
- Studied the resource manager architecture in detail, which forms the base for system APIs for GPUs.
- Solved bugs and worked on feature requests related to the vGPU stack, using systems level C programming.

Backend Developer Intern — Feb. 2021 – July 2021
ICICI Lombard GIC Ltd. — *Mumbai, India*
- Migrated a database from SQL Server to Oracle with 25 tables, 35 procedures and over 50,000 rows of data
- Assisted in solving everyday issues about 5 production applications such as debugging C# APIs using Postman

PUBLICATIONS

Dynamic Identification of Learning Styles in MOOC Environment Using Ontology Based Browser Extension
| *International Journal of Emerging Technologies in Learning (iJET)* June 2021
- Developed & Published a Chrome browser extension that scrapes usage data from MOOC platforms
- Built using NodeJS running on Google Cloud AppEngine. Converts parsed JSON data into SQL
- Developed Python scripts to generate final recommendations based on the data collected above

Natural language query formalization to SPARQL for querying knowledge bases using Rasa
| *Progress in Artificial Intelligence* — December 2021
- 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.

PROJECTS

Electronic Assessment System | *NodeJS, NGINX, MySQL, Ubuntu VM, React, Gatsby, Memcache* — August 2019
- Developed an online assessment system from scratch as per the custom requirements of my instructors.
- Currently deployed on a VM on Oracle Cloud with 4 ARM vCPUs and 24 GB Ram. Installed Ubuntu, Node, Nginx, PM2, Mayavi, and NoMachine in an AARCH64 environment.
- Some pages developed using Gatsby and React.js templates for quick rendering, does load balancing using Nginx.

SKILLS & CERTIFICATIONS

Languages: Java, Python, C/C++, C#, JavaScript, HTML/CSS, MATLAB,R
Frameworks & Tools: Node.js, Nginx, Tensorflow, Pytorch, MySQL, Amazon AWS, Git, Microsoft Azure

Achievement: All India Rank 1 in National Financial Literacy Test 2014 (Organized by RBI, SEBI, NISM India)

Test Scores: GRE: 325 (166 Q, 159 V), TOEFL: 112 (28 R, 29 L, 27 S, 28 W)

Certifications: *Business Foundations & Business Analytics Specialization* by Wharton School of Business
Deep Learning Specialization by deeplearning.ai
Google IT Support Professional Certificate by Google
Data Science Specialization by Johns Hopkins University