ASHINA AGARWAL

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EDUCATION

University of Washington, College of Arts and Sciences   **Seattle, WA**
Bachelor of Arts in Mathematics, Minor in Applied Mathematics (GPA 3.36)   *August 2022 (Expected)*
Anticipated Coursework: Combinatorial Theory, Elements of Statistical Methods, Elements of Machine Learning

PROFESSIONAL EXPERIENCE

Math Study Center Tutor at *Department of Mathematics, University of Washington*   **Seattle, WA**
- Tutored 50+ students in calculus and related concepts covered in Pre-Calculus and Calculus series of math   *Sept 2019-Present*
  courses offered by the Department of Mathematics - Differential calculus, Integral calculus, Analytical geometry,
  Taylor polynomials, Taylor series, Vector geometry.

C21@Microsoft Externship Program at *University of Washington*   **Seattle, WA**
- Shadowed a program manager as they oversaw the analytics team & structured insights into strategic opportunities   *Jan 2022-March 2022*
- Learnt in an occupational setting about the professional opportunities in the field of data science in the form of
  one-on-one sessions.

Machine Learning Intern at *UST Blueconch Technologies*   **Pune, India**
- Successfully deployed connected neural networks, CNNs, RNNs, Generative neural networks and reinforcement learning   *June-Aug 2021*
  using various machine learning frameworks – Tensorflow, Keras and Pytorch.
- Undertook an individual project on Sentiment Analysis on social media images, which focused on interpreting and predicting
  the underlying sentiment behind the images using various machine learning tools.

Database Management Intern at *Hindustan Distributors Private Ltd.*   **Chandigarh, India**
- Worked under IT department to manage databases by identifying, collecting, and cleaning data on product   *Aug-Oct 2017*
  production, prices, and trade flow according to the need of sectoral advisors.
- Assisted in maintaining electronic copies for data collected in well-organized structure as directed by IT professionals.

Data Engineering Intern at *Coraza Technologies Private Ltd.*   **Bangalore, India**
- **Compiled and prepared large-scale data** on various apps like Uber, Zomato, etc. conducted quantitative analysis on   *April-June 2017*
  popularity of apps on Tapzo and interpreted key insights based on public requirement of the app, saving 45+ hours
  of manual work. Utilized the resulting inferential statistics in predicting demographics of the app users.
- Coordinated with the technical department to structure and enhance accessibility of the app.

PROJECTS UNDERTAKEN

Sentiment Analysis on images in social media
- **Optimized an algorithm for interpreting and predicting sentiments** behind images found on social media platform, Instagram, under
  supervised and unsupervised learning environment by deploying Convolutional Neural Networks and Recurrent Neural Networks. The
  prototype was later used in doing predictions on different social media platforms – Twitter and Pinterest.
- Developmental Tools: **Tensorflow, Keras, Python**

Visual Analysis on Bike Sharing Program in Washington DC, GitHub Link
- **Collected and analyzed** bike sharing data in Washington DC from 2010-2021 with a goal to provide insights into how citizens and tourists
  used the bike program. **Visually explored correlation and published results** of bike riding with weather, destination, ride duration by
  plotting interactive plots and using geographical mappings.
- Development Tools: **Tableau, Vega-Lite, D3.js, Arquero (Javascript Library)**

Controlling Memory Selection in the Hopfield Memory Network
- Study on developing non-linear control procedures on Hopfield neural network. Created a neural network to jump between memories in the
  storage space as the complexity and instability of memories in the system grows. Explored the relationship between the creation of memory
  network and the resulting directed graph it generates, where MNIST digits serve as the memories.
- Development Tools: **MATLAB, Python**

LEADERSHIP EXPERIENCE

Campus Correspondent for *Her Campus Washington*   **Seattle, WA**
- Responsible for leading the UW chapter of the National Collegiate Magazine ***Her Campus*** consisting of 60+   *2019-Present*
- Lead and represented the Events team, Editorial team, Social Media team and YouTube team of the chapter.
- Carried out sponsorships and campaigns with different brands like Garnier, Command, Just, Universal Standard.

Assistant Vice President of Finance for *Alpha Omicron Pi, Upsilon Chapter*   **Seattle, WA**
- Created a quarterly budget for the chapter, managed all the expenses and the billing portals associated with the chapter.   *2019-2020*
- Analyzed the finances related to the Upsilon Chapter and created a successful payment plan for all the members.

Events Officer for *Unite UW Student Association (UUSA)*   **Seattle, WA**
- Successfully organized core association events per quarter for over 100 members.   *2019-2020*
- Recruited and oversaw a society events committee to plan quarterly professional development events.

SKILL SET

Technical Skills: Python, R, Java, SQL, Git, MATLAB, Terminal, LaTeX, Tableau, Cascading Style Sheets, Microsoft Office Suit, Microsoft Excel,
Tensorflow, Keras, Pytorch, Microsoft Cognitive Toolkit, Vega-Lite, D3.js
Languages: English (Native), Hindi (Native), Punjabi (Professional Working Proficiency), French (Elementary Proficiency)