

EDUCATION

Post Graduate Diploma (DipASR) in CS GPA: 3.88/4.00, Ashoka University	Aug 2021 - May 2022 Sonipat, India
B.Sc (Hons.) in Computer Science GPA: 3.87/4.00, Ashoka University	Aug 2018 - May 2021 Sonipat, India

WORK EXPERIENCE

Data Scientist <i>Vayana Network</i>	Jun 2022 – Present Hybrid Bengaluru, India
<ul style="list-style-type: none">Processing and managing the company's data efficiently and securely by building a central data repository on AWS through data pipelines and internal libraries.Investigating the company's business network through data analysis and graph modeling to identify key patterns, trends, and potential customers shaping the company's business growth strategies.	
Data Science Intern <i>Ageless Partners</i>	Nov 2021 – Mar 2022 Remote
<ul style="list-style-type: none">Designed the architecture for a fitness recommendation application based on wearable devices and led the team toward implementing the first milestone.Assessed the effectiveness of different anti-aging drugs and products endorsed by the company through analysis of customer feedback data.	
Web Developer <i>Techvik</i>	Jun 2020 – Sep 2020 Remote
<ul style="list-style-type: none">Redesigned and remodeled the platform's website on WIX, increasing the user traffic by up to 20 %.Optimized the website's load time and increased its SEO performance by 30 % through media optimization and extensive keyword tagging.	

RESEARCH EXPERIENCE

Privacy Preserving Neural Networks <i>Capstone Project, Ashoka University</i>	Aug 2021 – Dec 2021 Sonipat, India
<ul style="list-style-type: none">Mentors: Prof. Mahavir Jhawar & Prof. Debayan GuptaResearched and explored various methods and techniques for securely and efficiently training neural networks in multi-party settings (MPC).Thoroughly analyzed and implemented (in C++) the building blocks of SecureNN paper reproducing the results as my Capstone Project. [Presentation Report Code]	
Research Intern <i>Mphasis Lab, Ashoka University</i>	May 2021- Aug 2021 Sonipat, India
<ul style="list-style-type: none">Mentor: Prof. Mahavir JhawarSuccessfully studied and implemented (in C++) different Privacy Preserving Machine Learning (PPML) protocols such as SecureML and BLAZE highlighting their merits and demerits. [Details Code]Designed an efficient and faster protocol tailored to meet business requirements by developing a novel algorithm to securely evaluate non-linear activation functions.	
Secure Machine Learning <i>Independent Study Module, Ashoka University</i>	Jan 2021 – May 2021 Sonipat, India
<ul style="list-style-type: none">Mentor: Prof. Debayan GuptaStudied the impact of adversarial attacks such as Data Poisoning and Model Evasion on the performance and reliability of machine learning (ML) models.Demonstrated the attacks in the Subpopulation Data Poisoning Attacks paper to understand the impact of poisoning attacks on real-world machine learning models. [Presentation Code]	
Applied Cryptography <i>Independent Study Module, Ashoka University</i>	Jan 2021 – May 2021 Sonipat, India
<ul style="list-style-type: none">Mentor: Prof. Mahavir JhawarExamined and evaluated the security vulnerabilities in email clients that support the two primary forms of end-to-end email encryption: OpenPGP and S/MIME.Illustrated the attacks on various email clients outlined in the Mailto: Me Your Secrets paper and suggested countermeasures against them. [Report Code]	

KEY PROJECTS

Headline Generation via Abstractive Text Summarization

May 2022

- Mentor: [Prof. Lipika Dey](#)
- Explored various text summarization techniques, primarily focusing on Transformer-based models, to identify optimal solutions for generating brief and informative headlines.
- Fine-tuned Google's **Pegasus** model with 568 million parameters using *PyTorch* to generate concise headlines from summaries of news articles. [[Presentation](#) | [Code](#)]

India's CSR Data Synchronization

Sept 2021

- Mentor: Shaivya Verma
- Analyzed India's CSR Data of the last five years using *Pandas* to observe the expenditure trends by various Indian companies as part of the Hack & Learn Summit 2021, Government Outcome Labs, University of Oxford.
- Presented our findings at the Social Outcome Conference 2021 (SOC21). [[Presentation](#) | [Slides](#)]

Synthesizing DFAs

May 2021

- Mentor: [Prof. Mahavir Jhawar](#)
- Thoroughly examined and analyzed the backpropagation algorithm used to calculate gradients in recurrent neural networks.
- Implemented an RNN-based model in *Python* to automate the process of synthesizing DFAs. [[Presentation](#) | [Code](#)]

Age & Gender Detection

Dec 2020

- Mentor: [Prof. Ravi Kothari](#)
- Evaluated the strengths and weaknesses of different ML techniques for the correct classification of human faces.
- Developed industry-level CNNs using *Keras* to identify the age and gender of human facial images. [[Report](#) | [Code](#)]

TECHNICAL SKILLS

Languages	Python, C/C++, JavaScript, HTML5/CSS, \LaTeX	Data Analysis	R, SQL, MongoDB, Pandas, PySpark
Modeling	TensorFlow, PyTorch, <i>scikit-learn</i> , NumPy	Software Dev.	Django, React JS, Vue JS, Git
Other Tools	AWS, Plotly & Dash, Linux, Selenium		

TEACHING EXPERIENCE

Undergraduate Teaching Assistant

Multiple Semesters

[Computer Science Department](#), Ashoka University

Sonipat, India

- **Discrete Mathematics** (CS - 1104), Spring 2021, Prof. Subash Bhalla, Class Size: 100
Tasks: holding weekly office hours, setting and grading assignments and test papers, and facilitating online lectures.
- **Probability & Statistics** (CS - 1208), Monsoon 2020, Prof. Mahavir Jhawar, Class Size: 80
Tasks: holding weekly office hours, grading assignments and test papers, and facilitating online lectures.

STEM Facilitator

Jun 2019 - Jul 2019

[Maa Anandmayee School](#)

Dehradun, India

- Helped the school build a STEM lab partnering with MakersBox Delhi through equipment selection, procurement, and setup.
- Taught students about the latest technologies and inquiries in STEM education such as Robotics, Lego, IoT, VR, etc. through hands-on projects.

Private Tutor

Aug 2017 - Jul 2018

[Next Education Academy](#)

Kathmandu, Nepal

- Tutored high school students in various A-level subjects, including Physics, Chemistry, and Mathematics.
- Assisted in scheduling and facilitating the academy's tutoring classes.

LEADERSHIP & ACTIVITIES

Resident Assistant Office of Student Affairs (OSA)	2021 - 2022
Peer Mentor Office of Learning Support (OLS)	2020 - 2021
IT Team Ashoka University Election Commission (AUEC)	Feb 2020
Event Organizer Ashoka University International Student Association (AUISA)	2018 - 2020
Ashoka Volleyball Team Ashoka University	2018 - 2020

AWARDS & SCHOLARSHIPS

Bronze Medal CS Awards, Ashoka University	Jun 2022
Silver Medal CS Awards, Ashoka University	Jun 2021
Dean's List Ashoka University	All 8 Semesters
Full Scholarship on Tuition and Residence Ashoka University	2018 - 2022
Merit Scholarship on Tuition and Residence Budhanilkantha School	2016 - 2017
Baniya Excellence Award for Academic Achievement Budhanilkantha School	Jan 2016
NP Sharma Excellence Award for Academic Achievement Budhanilkantha School	Jan 2016