

Rudraksh Gupta | Curriculum Vitae

SN – 33 Shastri Nagar, Jalandhar, Punjab 144001
+91-9888886882 | rudrakshgupta021@gmail.com
rudrakshgupta.com | linkedin.com/rudraksh

SUMMARY

Experienced in artificial intelligence, software development, and data analysis, I have completed a Bachelor of Computer Applications (BCA) from Guru Nanak Dev University with a merit. My professional journey includes internships at esteemed organizations such as Infosys, Microsoft, and Eve Healthcare, where I developed and deployed AI models, full-stack applications, and data-driven insights. I have actively contributed to open-source projects and have a strong portfolio of end-to-end projects ranging from cybersecurity to multimedia broadcasting. With a robust set of certifications from Google, Cisco, EC-Council, and others, I am skilled in various technologies and methodologies. My research work has been published in reputed journals, and I have earned multiple awards and scholarships for my academic and technical achievements. As a dedicated volunteer, I have participated in initiatives promoting environmental sustainability and drug safety.

EDUCATION

Guru Nanak Dev University – (NAAC A++)
Bachelor of Computer Applications (BCA)
Grade – 74%(A) | Position – 3rd

Amritsar, PB
July 2021 - July 2024

PROFESSIONAL EXPERIENCE

Infosys Springboard
Artificial Intelligence Project Intern

Hyderabad, Telangana
June 2024 - Present

- Developed a Handwritten Digit Recognition System: Created a system utilizing the LeNet-5 architecture, focusing on identifying handwritten digits.
- Preprocessed and Augmented the MNIST Dataset: Cleaned, normalized, and augmented the MNIST dataset to enhance the quality and variability of training data.
- Implemented the LeNet-5 Convolutional Neural Network: Used Python and TensorFlow/Keras to code the architecture, focusing on convolutional layers, pooling layers, and fully connected layers.
- Optimized the Model: Applied techniques such as dropout and regularization to improve model performance and prevent overfitting, ensuring robustness and accuracy.
- Deployed the Model for Real-Time Recognition: Integrated the trained model into a real-time application, allowing for immediate handwritten digit recognition and gaining practical experience in deploying machine learning models.

Microsoft | Future Ready talent*Artificial Intelligence Intern***remote**

Apr 2024 - June 2024

- Developed and deployed a full stack medical application using Azure services, including Azure Static Web Apps, Azure Bot Service, and Azure Maps. Built responsive and user-friendly front-end applications with React.js, enhancing the user experience.
- Implemented an Azure-based chatbot for instant user support utilizing natural language processing. Set up CI/CD pipelines, ensuring smooth and automated deployment processes.
- Integrated secure authentication and connected backend services with APIs, ensuring robust and secure application functionality.

Meriskill*Data Analyst Intern***virtual**

Mar 2024 - Apr 2024

- Analyzed datasets to develop predictive models for diabetes using statistical and machine learning techniques. Cleaned, processed, and transformed raw data for improved accuracy in predictive analytics.
- Collaborated with the team to identify key metrics and insights for the diabetes prediction project.
- Designed and maintained interactive sales dashboards in Power BI for real-time performance tracking. Provided regular reports and visualizations to stakeholders, enhancing decision-making processes.

Eve Healthcare Centres Pvt. Ltd.*Software Developer Engineer (SDE) Intern***Noida, Haryana**

Mar 2023 - Nov 2023

- Developed RESTful APIs: Created and maintained APIs to facilitate seamless communication between the client and server. Managed SQL and NoSQL databases to ensure efficient data storage and retrieval.
- Frontend Development: Built responsive user interfaces with React.js, handled state management with Redux, and integrated APIs. Set up CI/CD pipelines, utilized Docker for containerization, and deployed applications on AWS.
- Agile and Code Management: Participated in Agile practices, managed code with Git, documented the project, and focused on bug fixing and performance optimization.

ASKYRA Business Solutions (ABS)*Founder and Lead Developer***Jalandhar, PB**

Jan 2021 - sept 2022

- Launched and Managed Startup: Founded a tech solutions company focused on web and app development, overseeing all business operations, which involved designing and developing responsive websites and mobile applications, ensuring functionality and user-friendly interfaces.
- Team Leadership: Recruited, trained, and led a team of developers and designers, fostering a collaborative and productive work environment. Built and maintained strong client relationships, provided technical support, and ensured high levels of customer satisfaction.
- Marketing and Financial Management: Developed marketing strategies to attract clients, managed the budget, and secured funding through investors and grants.

RESEARCH EXPRIENCE

Apeejay College of Fine Arts

Department of Computer Science

(Research Assistant)

Advisor/Supervisor: Dr. Jagmohan Mago, Dr. Roopali Sood

Project/s: Conducting Research on Cyber crimes and Hybrid Electric Vehicles

Jalandhar, PB

Jan 2024 – July 2021

PUBLICATIONS

Hybrid Electric Vehicle Analysis: Integrating ADVISOR and Artificial Neural Networks for Predicting Performance and Emissions

IRJMETS

Volume: 06 | Issue: 07 | July 2024

Authors: Dr. Jagmohan Mago, Rudraksh Gupta, Yuvraj Sachdeva

<https://www.doi.org/10.56726/IRJMETS60255>

In order to prevent the dangerous emissions along with saving petroleum fuels, surge in a popularity of electrical vehicles is seen because of its ability of zero local emission and incentives from the government. Nevertheless, it is really challenging to transit into fully EV economy due to its inescapable limitations. Therefore, hybrid vehicles act as great intermediary between conventional and electric vehicles. This research paper works to evaluate the dangerous and harmful pollutant emissions from hybrids vehicles using ADVISOR, focusing on three varying driving cycles; UDDS, NEDC and US06 while differentiating the emissions of these cycles by changing the initial state of charge. Toyota Prius parallel Hybrid vehicle model was selected for comparison. For predicting different performance parameters such as Brake Thermal Efficiency, Break Power and Harmful emissions (CO, HC, NOx), Artificial Neural Network along with ethanol-gasoline blend type (E0 – E20) was used. The final ANN model developed achieved the best correlation coefficient stretching from 0.96567 to 0.99989 for every performance parameter and exhaust emissions.

Unveiling Cyber Crimes: A Comprehensive Overview of Cybersecurity Laws and Practices

IRJET

Volume: 11 | Issue: 07 | July 2024

Authors: Dr. Roopali Sood, Rudraksh Gupta

<https://www.irjet.net/archives/V11/i7/IRJET-V11I745.pdf>

The internet connects linked networks worldwide. It eases data and information flow between different networks. Security issues have grown in importance as networks exchange data across distant locations. Some individuals exploit the internet for illegal acts like network breaches and fraud. These internet-related crimes go by the name "Cyber Crimes." We hear this term often in news reports due to the rising popularity of online banking and shopping. To combat and penalize cyber criminals, authorities created "Cyber Law." This law governs the web. It forms part of legal frameworks addressing the Internet, cyberspace, and related issues such as online security and privacy. This research conducted by Guru Nanak Dev University student splits into sections to achieve its goals. It presents a quick look at cybercrime's nature, its actors - hackers and crackers, and its various forms. The text also tracks how cyber laws evolved in India. It sheds light on these laws' workings and suggests ways to fight this high-tech crime in India. The chapter aims to give readers a clear picture of the cybercrime landscape and India's response to it.

Usability of input methods within mobile devices: A comparative study between Voice-to-text vs soft keyboard

IRJET

Volume: 11 | Issue: 01 | Jan 2024

Authors: Rudraksh Gupta

This study, rooted in Human-Computer Interaction (HCI), meticulously compares mobile input methods— Voice-to-text and Soft Keyboard. The research was conducted by Guru Nanak Dev University student and scrutinizes their advantages and limitations through a 2×2 within-subjects designs with 10 participants. Contrary to expectations within the HCI framework, Soft Keyboard consistently outperforms Voice-to-text in input speed, indoors and outdoors. This challenges assumptions and calls for future HCI research to embrace a comprehensive evaluation framework, considering factors like user preferences and accuracy, ensuring mobile interfaces align seamlessly with user needs.

DNA Storage: The Future of Information Archiving

IRJMETS

Volume:06 | Issue:01 | Jan 2024

Authors: Rudraksh Gupta

<https://www.doi.org/10.56726/IRJMETS48682>

The whole of humanity has always been enamored of possessing more and more information in the least possible time. Subsequently, contemporary-age computers and expeditious internet have gained popularity in the last few years. The transformation of hard drives of considerable size into flash drives has been seen, which facilitated personal data storage to be easily manageable. However, in managing enormous data, data of a corporation, or the whole world, the current storage technology is incapable of handling it competently. A prompt step for a bona fide approach for data storing and retrieval purposes arises. In this context, Deoxyribonucleic Acid (DNA) is regarded as a critical approach for analogous tasks intrinsically, since it is related to the sequential code of zeroes and ones in a machine. Therefore, DNA storage has been an intriguing area for potential researchers for a decade, owing to significant developments along the way. Drawing its inspiration from sci-fi, “a small dimension gadget could reserve the entire information as the whole internet”. The information researched discovers that only 4 grams of DNA is capable of storing entire data produced by the world in a single cycle of 365 days. The topic of DNA storage is exhaustive stating all the research from first to present, its uses and issues, the need for DNA digital data storage, and how it will be transformed into a drastic change in the field of computing.

HONOURS & AWARDS

IT Euphoria Brainstorm 2024

ODE TO CODE - 3rd Position

Kanya Maha Vidyalaya

PG Department of Computer Science and Applications

IT Euphoria Brainstorm 2023

ODE TO CODE - 2nd Position

Kanya Maha Vidyalaya

PG Department of Computer Science and Applications

Merit Scholarship 2022 (For securing more than 85% in first semester)

Apeejay College of Fine Arts

Department of Computer Science

HACKATHONS

Apeejay IT Sparks 2023

Logic Testing – Participated

VOLUNTEERING

Earth5R

Software Development Volunteer

remote

July 2024 – Present

- **Software Development for Environmental Sustainability:** Volunteered with Earth5R to design and implement user-friendly applications promoting eco-friendly practices; collaborated with a diverse team.
- **Technical Responsibilities:** Engaged in coding, testing, and debugging software; participated in brainstorming sessions to enhance functionality and user experience.
- **Skill Development and Community Engagement:** Developed technical skills while supporting initiatives that encourage environmental awareness and community involvement.

Ministry of Social Justice and Empowerment, GOI

Drug safety Volunteer

remote

Apr 2024 – Jul 2024

- **Drug Safety Awareness Workshops:** Actively participated in initiatives by the Ministry of Social Justice & Empowerment, Government of India; educated peers in school on substance abuse risks and safe medication practices.
- **Community Collaboration:** Worked with local NGOs to raise drug safety awareness; provided resources and support for individuals facing addiction in the community.
- **Support Group Facilitation:** Helped organize and facilitate support groups; created a safe space for students to discuss drug safety and related issues.

OPEN SOURCE CONTRIBUTIONS

Girl Script Summer of Code (GSSoC)

Open-Source Contributor

remote

May 2024 – Present

- Actively contributed to collaborative projects in the Girl Script Summer of Code (GSSoC), enhancing proficiency in Python, JavaScript, React, and Django.
- Involved in coding, issue resolution, and feature implementation; participated in code reviews, provided feedback, and applied best practices in software engineering.
- Gained experience in version control systems (Git) and teamwork; developed problem-solving abilities and a deep understanding of the open-source ecosystem.

PROJECTS

For detailed reference of the developed projects, please visit [here](#).

Local Web Login Brute Force Exploit | Python, Burp Suite

- Developed a project demonstrating a brute force attack on a self-hosted website to highlight cybersecurity

vulnerabilities. This involved creating and configuring a local web server, implementing a brute force attack script, and analyzing the effectiveness of various security measures.

- The project aimed to improve understanding of login security and the importance of robust password policies. Utilized Python for scripting and web technologies for server setup.

Multimedia Broadcast over IP Network | C, Python, UDP

- Engineered a project focused on multicasting multimedia content over IP networks, specifically for internet radio broadcasting. This involved setting up a streaming server, configuring multicast transmission, and ensuring efficient distribution of audio content to multiple receivers.
- Utilized networking protocols and multimedia frameworks to implement and optimize the streaming process, emphasizing scalability and reliability. The project demonstrated the practical application of IP multicast technology in real-time multimedia broadcasting.

Algo Explorer and Visualizer | Html, CSS, JavaScript

- Developed an interactive web application that visualizes various algorithms, enhancing understanding of complex concepts. Utilized HTML, CSS, and JavaScript to create engaging visual representations of sorting and searching algorithms. Implemented user-friendly features, allowing users to step through algorithms in real-time, facilitating both learning and exploration.
- Improved educational accessibility through a clear, intuitive interface, catering to students and enthusiasts in computer science.

Crypto Connect | Python

- Created a secure communication tool that employs advanced encryption techniques to safeguard data transmission. Developed using Python, enabling seamless integration and user-friendly operation. Implemented robust cryptographic algorithms to ensure data confidentiality and integrity.
- Focused on enhancing cybersecurity awareness and providing a reliable solution for users needing secure links for sensitive information exchange.

CERTIFICATIONS

Google Cybersecurity Professional Certificate	July 2024
Red Teaming Path - TryHackMe	July 2024
Junior Cybersecurity Analyst Career Path – Cisco Networking Academy	July 2024
Network Defense Essentials – EC – Council	July 2024
Google Advanced Data Analytics Professional Certificate	June 2024

CO-CURRICULAR ACTIVITIES

State Level Runner

Jan 2021 - Present

- State-level runner with a strong dedication to athletics, seeking to represent at national and international levels.

Run to End Aids – Punjab Institute of Medical Sciences

December 2018

- Supported efforts to raise awareness about HIV/AIDS, collaborating with fellow participants to promote public health education and community involvement.

Member of IT Forum – Apeejay College of Fine Arts

July 2021 – July 2024

- Active member of the IT Forum at Apeejay College of Fine Arts, contributing to the planning and execution of various technology-related events and hackathons.

Accenture North America Data Analytics & Visualization Job Simulation on Forage

February 2024

- Completed a simulation focused on advising a hypothetical social media client as a Data Analyst at Accenture.
- Cleaned, modeled and analyzed 7 datasets to uncover insights into content trends to inform strategic decisions
- Prepared a PowerPoint deck and video presentation to communicate key insights for the client and internal stakeholders.

Goldman Sachs Software Engineering Virtual Experience Program on Forage

February 2024

- Completed a job simulation as a Goldman Sachs governance analyst responsible for assessing IT security and suggesting improvements.
- Identified that the company was using an outdated password hashing algorithm by cracking passwords using Hash Cat
- Wrote a memo for my supervisor summarizing a range of proposed uplifts to increase the company's level of password protection including extending minimum password length and using a dedicated hashing algorithm.

LANGUAGES

HINDI	NATIVE
PUNJABI	NATIVE
ENGLISH	PROFESSIONAL/CLB-9
FRENCH	BEGINNEER/DELF-A2

SKILLS

DevOps | Docker | Docker Compose | Kubernetes | CI/CD | GitOps | Argo CD | Helm | Kustomize | GitHub Actions | Cloud | AWS | GCP | Jenkins | Ansible | Automation | Terraform | NodeJS | Python | JavaScript | TypeScript | Backend Development | FastAPI | Bash | Scripting | Linux | Logging | Monitoring | Prometheus | Grafana | Project Management | Communication | Leadership | Time Management | Adaptability | Problem Solving | Teamwork | Creativity

PROFESSIONAL MEMBERSHIPS

ISC2 Candidate, 2024 - Present