# Neil Goyal

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## EDUCATION

### Georgia Institute of Technology
Atlanta, GA

*Bachelor of Science in Computer Science*     *Expected Graduation, May 2025*

- **Concentrations:** Intelligence and Information Internetworks

## EXPERIENCE

### Software Engineering Intern
June 2021

*Hackershala Pvt. Ltd.*

- Developed a Network Intrusion Detection System (IDS) that uses machine learning to detect and flag malicious activity on a server.
- Developed the random forest classifier model ($\approx$96% test accuracy) using Python and scikit-learn.
- Processed and cleaned data using pandas and NumPy.
- Deployed the model as a RESTful API using Python and Flask for public use.

### Software Engineering Intern
June 2020 – July 2020

*Gurugram Police Cybersecurity Cell*

- Shadowed industry experts to learn more about different fields in cybersecurity, from cyber crimes and law to common vulnerabilities and how to defend against them.
- Developed tools such as honeypots (decoy network systems) to assist law enforcement agencies and forensics.
- Utilized Kali Linux (a Linux distro) and several tools such as Burp Suite, Nmap, and Wireshark.
- Competed in and won multiple state-level Capture The Flag competitions.

### Research Intern
June 2020 – July 2020

*Sushant University*

- Researched how technology could be used to diagnose and aid those with neurodevelopmental disorders.
- Created a game application with an integrated diagnostic test to aid in the early detection of dementia, Alzheimer's, and similar cognitive impairments (200+ installs on the Google Play Store).
- Developed the game using the Unity Engine and C#.
- Published a research paper summarizing the project and key findings.

## PROJECTS

### DayTrak | *github.com/neilgoyal/DayTrak*
Dec. 2020 – March 2022

- Developed an application using Flutter that allows students to view a personalized timetable and assignment manager (Officially adopted by my school - 400+ installs).
- Utilized Firebase for Google Auth and storing user data in the cloud.
- Served real-time data to the application using a RESTful API developed in Python and Flask.

### SafeSurf | *github.com/neilgoyal/SafeSurf*
June 2020 – June 2021

- Developed a Chrome extension using JavaScript and HTML/CSS that uses machine learning to flag malicious and fraudulent websites.
- Built an SVM (Support Vector Machine) model using Python and scikit-learn to flag the aforementioned sites.
- Implemented a neural network using Python, TensorFlow, and Node.js ($\approx$97% test accuracy).

## TECHNICAL SKILLS

**Languages**: Python, JavaScript, Java, C/C++, C#, Kotlin, Dart, Swift, GNU Octave, MATLAB, SQL, HTML/CSS
**Frameworks**: TensorFlow, Flutter, Node.js, Flask, Django, WordPress, Keras, PyTorch, Unity Engine
**Developer Tools**: Git, Docker, Firebase, Kubernetes, Google Cloud Platform, AWS, Heroku
**Libraries**: pandas, NumPy, Matplotlib, scikit-learn, OpenCV, SciPy, NLTK, Requests, Theano, LightGBM, Selenium
**Concepts**: Data Structures and Algorithms, Object-Oriented Programming, Cloud Computing, Machine Learning, Deep Learning, Computer Vision, Human-Computer Interaction