


Aneesh Gupta

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EDUCATION

Duke University — *Bachelor of Science*

Aug 2018 - May 2022

Computer Science. Minor in Mathematics. Certificate in Philosophy, Politics, Econ.

GPA: 3.95/4.0

Coursework: Algorithms, Computer Architecture, Discrete Math, Probability, Linear Algebra, Databases, Advanced Software Design, Applied Math, Combinatorics, Artificial Intelligence, Sampling & Markov Chains

WORK EXPERIENCE

Facebook, Inc.

Menlo Park, CA

Software Engineering Intern - Networks Infra and Delivery Systems

May 2021 - Present

- Built a database schema *linting* service to analyze and validate data from networks and data-centers.
- Designing end-to-end API using **Thrift**, **Python**, and **PHP** to expose networks metadata to internal UI.
- Enhanced CI/CD and auditing frameworks to improve test coverage, and reduce false positive errors.

ANB Systems, Inc.

Houston, TX

Software Engineering Intern

May 2020 - Aug 2020

- Enhanced document recognition by improving Python image extraction algorithms accuracy by **75%**.
- Sped up data wrangling and analysis by **3.5x** by building an **AWS Lambda** based worker to ingest, transform and process large payloads of unstructured data automatically, and produce visualizations.
- Designed an end-to-end Data Lake with **Flask** endpoints to manage data streams, control and retrain machine learning models as newer data comes in, and increase their accuracy with time.

Evidence for Policy Design - Harvard Kennedy School

New Delhi, India

Software Development Intern

May 2019 - Aug 2019

- Built custom software packages using **Python** for data ETL between **SQL** servers and web application.
- Increased processing efficiency for social networks data by **80%** by using *fuzzy string-matching* algorithms.
- Sped up system testing & data retrieval by **5x** using Selenium drivers to automate scraping and testing.
- Launched a dashboard in **R Shiny** to help measure women's smartphone access and usage in rural India.

Dept. of Computer Science, Duke Univ.

Aug 2019 - Present


Teaching Assistant:

Intro to CompSci, Interdisciplinary Computing, Programming Interview Skills

RESEARCH & PROJECTS

Applied Machine Learning Lab - *Undergraduate Researcher*

Aug 2019 - Present

- Tackling semantic segmentation for medical scans and satellite imagery using methods like encoder-decoder networks, vision transformers, and other image processing and machine learning techniques.
- Built a system to generate synthetic textures and model artificial cities realistically, to improve and produce richer training data to enhance generalisability of remote sensing models. **Link** .
- Investigated deep learning and computer vision techniques to map electricity distribution and access.

Project Minerva: Creating a search engine to improve access to online learning resources like top courses, videos, books, blogs, & code-bases in a single place. Made using React, Flask, Selenium, & requests. **Link** .

HouseOfCards: Built a graphical suite of games like Solitaire, Cards Against Humanity, Truth or Dare, & Concentration. Used immutable APIs, Inheritance, testing, & MVC, using JavaFX & Stylesheets. **Link** .

SKILLS

Programming Languages

Python, Java, JavaScript, Scheme, C++, R, MATLAB, SQL

Frameworks & Tools

Latex, PyTorch, Flask, React, Linux, Git, CI/CD, Pandas, NumPy

Interests

World History, Tech and Policy Development, Philosophy, Computer Vision