Abhay Singh

contact

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education

Cornell University, Ithaca, NY
B.S. in Computer Science, GPA: 4.16/4.00 — May 2022 (expected)

coursework

Analysis of Algorithms, Systems Programming, Object-Oriented Programming & Data Structures, Discrete Structures, Linear Algebra, Probability Models & Inference, Multivariable Calculus

languages & technologies

Python, Java, HTML, CSS, JavaScript, C/C++, SQL, Bash, LaTeX,
Git, OpenCV, Keras, TensorFlow, NumPy, Pandas, SciPy, Docker, Flask

experience

Morgan Stanley, New York, NY
Incoming Technology Summer Analyst — June 2019 – Aug 2019

Cornell University Unmanned Air Systems, Ithaca, NY
Software Engineer, Computer Vision — October 2018 – present

- Developed software for real-time automatic detection, localization, and classification of multi-class target images captured from high-altitude autonomous aircraft
- Designed convolutional neural network with 93.8% classification accuracy on Fashion-MNIST
- Wrote scripts to automate workflow, automatically cropping and organizing tagged images

Damco Solutions Inc., New Delhi, India
Software Engineer Intern — June 2017 – June 2017

- Deployed Android application PhotoShelf (photoshelf.in) in development team of four
- Sped up workflow by 1 week by designing wireframes that allowed concurrent implementation of back-end logic and front-end design
- Consulted higher management and collaborated with the CEO & Managing Director to streamline the app's UX design and flow

Data Science for India
Instructor & Curriculum Developer — July 2017 – Oct 2017

- Developed introductory data science curriculum of 11 Jupyter notebooks that used numpy, pandas, and matplotlib to discern, visualize, and manipulate useful data from large data sets

projects

Space Invaders
- Implemented retro arcade game in Python with MVC and State design patterns

Virtual Stock Market
- Deployed RESTful web app in Python using Flask that retrieves live stock prices, storing transactions with SQLite
- Allows users to: sign-up, login, change password, quote live stock prices, buy and sell stocks at live prices, view index of owned stocks with total live value, & view trade history

Spellchecker
- Implemented spellchecker in C that determines misspellings against a changeable dictionary
- Stores words of English dictionary in a self-implemented hash table, using low-level memory management with pointer references, malloc(), and free()

Reddit Playlist
- Deployed Android app that converts subreddits into YouTube playlists
- Retrieves and plays video posts with a subreddit's RSS feed and YouTube's API

Tweet Sentiment Analyzer
- Scores user's tweets as positive, neutral, or negative using Twitter API and visualizes data

JPEG Recovery
- Recovers JPEG files from formatted memory cards (.raw files)