Sundeep Singh

(973)-980-8959 | singhsundeep64@gmail.com
sundeepsingh.net | linkedin.com/in/sundeepsinghnj

EDUCATION

University of Pennsylvania – Philadelphia, PA — Aug 2022 – Dec 2024 (expected)
Master of Science in Computer Science — GPA: 3.6 / 4.0

New Jersey Institute of Technology – Newark, NJ — Sept 2018 – Dec 2021
Bachelor of Science in Mechanical Engineering — GPA: 3.9 / 4.0

RELEVENT COURSEWORK & SKILLS

Relevant Coursework: Algorithms & Computation, Data Structures & Software Design, Computer Systems Programming, Big Data Analytics, Mathematical Foundations of CS, Electrical Engineering Principles

Programming Languages: Python, Java, C, C++, SQL, Apache Spark, LC3 Assembly, HTML, MATLAB

Technical Skills: Git, Linux, PyTorch, Pandas, Docker, AWS Cloud Computing, LaTeX, CAD, Microsoft Office Suite, Microsoft Power BI, Data Analysis

WORK EXPERIENCE

University of Pennsylvania – Philadelphia, PA — March 2024 – Present
Graduate Teaching Assistant (Intro to Computer Systems) for Dr. Thomas Farmer

- Lead recitation lectures and hold weekly office hours for over 200 graduate students, enhancing their understanding of complex subjects such as CPU architecture and C programming, with a focus on boosting academic performance
- Provide personalized tutoring sessions, assess student assignments, and work closely with faculty to refine and enhance course materials, ensuring clarity and improved comprehension for students

Collins Aerospace – Windsor Locks, CT — Feb 2022 – Oct 2022
Project Engineer I

- Provided design oversight and certification for specifications, drawings, and test plans for the Pratt & Whitney F100 and F119 turbofan engines
- Performed comprehensive system and component requirement reviews, conducted compliance assessments, and proactively managed project risks with strategic development of mitigation plans

Collins Aerospace – Windsor Locks, CT — May 2021 – Dec 2021
Air Management Systems (AMS) Service Engineering Intern

- Investigated AMS component failures in the Boeing 777 and 787 Dreamliner fleets, analyzing incoming field data to identify root causes and enhance fleet reliability

PROJECTS

Energy Forecasting | Python, SQL — March 2024 – April 2024

- Conducted in-depth analysis of raw energy production data using ARIMA models and advanced machine learning techniques, including gradient boosting, to accurately predict energy prices and demand patterns
- Generated and presented insightful visualizations with matplotlib and seaborn, showcasing comparisons between actual and forecasted prices, and detailing variations in energy requirements throughout the day

COVID-19 Data Analyzer | Java — May 2023 – Aug 2023

- Developed and documented a Java program utilizing memoization along with various design patterns to efficiently analyze COVID-19 data across 50 zip codes in the greater Philadelphia area
- Parsed JSON and CSV files to process and extract meaningful statistics and trends from the data, aiding in local health analytics and decision-making

Surveillance Drone | Python — Sept 2021 – Dec 2021

- Studied the complex nature and design of the neuromorphic camera with a multiplex sensor, evaluating its integration into surveillance drones as a superior alternative to conventional camera technology
- Supported the development of a Python-based AI program for a surveillance drone prototype, training it to identify moving subjects such as cars and pedestrians using annotated camera footage

HONORS & AWARDS

- Academic Excellence Scholar (NJIT) — Sept 2018 – Dec 2021
- Kaiser Scholarship (NJIT) — Sept 2020 – Dec 2021
- Michaud, J.Ray & M. Endow Scholarship (NJIT) — Sept 2020 – Dec 2021