

Subham Kumar

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EDUCATION

University of North Carolina at Charlotte

Charlotte, NC

Masters of Science in Architecture & Information Technology

Graduation: December 2022, GPA: 3.78

Indian Institute of Engineering Science & Technology

India

Bachelor of Architecture

2013-2018, GPA: 4/4

TECHNICAL SKILLS

Design Tools: Rhino, Grasshopper, Honeybee, EnergyPlus, ClimateStudio, Revit, Sketchup, AutoCAD

Languages: Python, JavaScript, Java, C#, C++, SQL

Web Technologies: HTML, CSS, JavaScript, Node.js, Express.js, React

Interface Design Tools: Figma, Adobe XD, Sketch, Adobe Illustrator, Adobe Photoshop

ML Packages: Pandas, NumPy, JAX, sci-kit-learn, PyTorch, TensorFlow, Keras

Frameworks: Flask, React, Django, Streamlit

Databases: MySQL, MongoDB (Intermediate)

Cloud Services: AWS EC2, Azure, Google Compute, Heroku

Visualization Tools/Softwares: AWS QuickSight, Tableau, PowerBI

WORK EXPERIENCE

UrbanSim Inc.

June 2022 – August 2022

Computational Design & Machine Learning Intern

Seattle - WA

- Worked on a Machine Learning Model using Graph Neural Network (GNN) that learns from Urban Parcel geometry, predicts place types (for e.g. Residential, Commercial, Industrial, etc.), and also predicts building footprint geometry.
- Worked on Machine Learning algorithm using Graph Neural Network (GNN) to capture Growth/Decline of population, income, and household for a given region over a period of time.

Urban Synergetics Lab & DARTS

January 2021 – Present

Research Assistant

UNC Charlotte, Charlotte - NC

- Worked on analyzing the relationship between the Cost and Demand of shared Mobility Systems (On-Demand mobility systems).
- Worked on a competition for Determining Transaction Categories Using Machine Learning and Natural Language Processing.
- Developed an application for Deception Detection Techniques in jointly embedded Texts and Images.
- Developed an application for Exploratory Data Analysis of Social Media Data and a data Pipeline for exploratory Data Analysis that would help Data Analysts and Social Scientists to understand social media data and can take relevant steps
- Working on the Machine-Learning (Decision Tree Model) that controls Air purification system using and Microcontrollers (Raspberry Pi).

HCP Design, Planning and Management Pvt. Ltd.

March 2019 – December 2020

Architect

Ahmedabad - India

- Worked on the Street Development Project, which primarily includes the development of the streets so as to have minimal impact on the surrounding landscape and increase Pedestrian safety.
- Worked on the Development of Central Vista Avenue, which includes developing publicly accessible museums, Creating a new common Central Secretariat to house all ministries, and a new Parliament building near the present one with increased seating capacity.