Prateek Chand

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EDUCATION

The University of Wisconsin - Madison: Bachelor of Science in Computer Science **Expected Graduation - 2028**

- HONORS: Dean's List (GPA: 3.846), King Morgridge Scholar (Full Ride Scholarship awarded to 6 international students each year)
- COURSES: Programming I, Programming II (Object-Oriented Programming, Data Structures, and Algorithms), Comp Sci 252 (Combinational & Digital Logic, Memory Systems, Instruction Set Architecture, and Assembly Language), Math 222 (Calculus 2), Math 340 (Elementary Matrix and Linear Algebra)

EXPERIENCES

TEKSI - DATA ANALYTICS RESEARCH INTERN, *Madison, Wisconsin* **Dec 2024 - Present**

- Researched and created a comprehensive plan for identifying, tracking and reporting key traffic and engagement metrics on Teksi's platform
- Designed a comparative report on the use cases, documentation, and features of different web analytics tools like Google Analytics 4, Amplitude, and PostHog specific to the needs of Teksi's web application to optimize user engagement, improve content strategy, ads and marketing ROI
- Prepared implementation plan and documentation for Google Tag Manager to help integrate custom features according to the data usage policies of Teksi

BIOKIND ANALYTICS - DATA ANALYST, *University of Wisconsin-Madison, Madison, WI, USA* **Sep 2024 - Present**

- Analyzed email engagement metrics (open rates, click-through rates, unsubscribe rates, and donor conversions) that helped assess campaign performance, donor clusters, retention and churn rates for the Village Diaper Bank (a non-profit)
- Collaborated with cross-functional team of 17 undergraduates to deliver actionable insights through interactive Tableau dashboards for project stakeholders

THE HEADSTARTER - SOFTWARE ENGINEERING FELLOW, *Remote* **Jul 2024 - Sep 2024**

- Collaborated in a team of 3 developers from around the world to deploy full stack web application within an aggressive weekly deadline for each project
- Implemented tech stack utilizing React.js, Next.js, Tailwind CSS, MaterialUI CSS, Google Analytics, Firebase, Vercel, and API endpoints for Large Language Model

SEDS SXC - RESEARCH SCHOLAR, *St. Xavier's College, Kathmandu, NP* **Mar 2021 - Feb 2024**

- Trained ARIMA, VAR, and Prophet time series models on open-source historical data for multivariable analysis of environmental factors affecting the air quality of Kathmandu city
- Led the data preprocessing that include designing ETL pipelines for automating API data collection, writing scripts for processing nested JSON files, implementing data imputation algorithms, and developing modules to transform non-stationary time series to stationary using unit root tests and differencing methods
- Conducted statistical tests and impulse response analysis and built visualization and documentation to track model performance
- Delivered high-precision 35 day forecast on Particulate Matter 2.5 concentration with a mean absolute percentage error of 0.096588 and a root mean square error of 0.501734
- Spearheaded the presentation of the findings at the Department of Environment, Government of Nepal, helping stakeholders identify the pattern of air pollution in Kathmandu in relation to forest fires and meteorological factors

PROJECTS

Cats and Dogs Image Classifier (TensorFlow, Keras) - Developed a convolutional neural network that achieved 72 percent accuracy in classifying unlabelled images

SMS Text Classifier (TensorFlow, Keras) - Designed a recurrent neural network that classified SMS messages as either "ham" or "spam" to differentiate a normal message from an advertisement with accuracy of 0.9875 and loss of 0.0584

Hand Pose Estimator (MediaPipe, OpenCV) - Implemented hand pose estimation model, calculating joint angles for kinematic analysis, and output images with detections

Rent Predictor for New York City (Sklearn, Django, JavaScript) - Collaborated on a website where users can calculate rents for Queens, Manhattan, and Brooklyn using 14 personalized specifications

Early Marriage Prevention (Python, Scipy, Matplotlib) - Conducted statistical analysis for tracking the trends of child marriage in different provinces of my homecountry using multivariate regression, identifying demography specific causes and intervention points, and presented the findings to students, researchers, and stakeholders

Party Hopper (PApplet Java) - Designed an interactive GUI application with movable objects using object oriented features like custom classes, inheritance hierarchies and polymorphism interfaces

Pantry Tracker (Next.js, Tailwind, Firebase) - Designed a full stack inventory management web application with real-time data synchronization using Firebase

Glacier Velocity in Mt. Everest (Linux, SNAP) - Utilized Sentinel 1A satellite data within a linux virtual machine to analyze velocity of the Khumbu Glacier, producing images that detected movement of 5.338 meters/day over a 10-day period

SKILLS & ADDITIONAL INFORMATION

Technical: Python, Java, JavaScript, HTML, CSS, SQL, Git, LaTeX | TensorFlow, Google MediaPipe, IBM Watson, Meta Prophet, Pandas, Numpy, Matplotlib, Scikit-learn, statsmodels, BeautifulSoup, Firebase, Vercel, FastAPI

Certs: Machine Learning with Python, IBM ML0120EN: Deep Learning with TensorFlow, Kaggle: Intro to SQL

Interests: Soccer, Astrophysics, Environmental Science, Blogging and Technical Writing, Public Speaking, Photography