Prateek Chand

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Education

University of Wisconsin–Madison **May 2028**
Bachelor of Science in Computer Science *Madison, WI*

- GPA: **3.943/4.0** | Dean's List (Fall 2024 & Spring 2025) | **King Morgridge Scholar** (Full-ride scholarship awarded annually to 6 students worldwide)
- Related Courses: Object-Oriented Programming, Data Structures and Algorithms, Linear Algebra

Experience

Sony Interactive Entertainment–PlayStation **Sep 2025 – Dec 2025**
Software Developer Intern *Madison, WI*

- Incoming intern at PlayStation, leveraging TypeScript, Python, and Jenkins to automate schema management and improve existing telemetry streaming pipelines.

Space Science and Engineering Center **May 2025 – Aug 2025**
Software Engineering Intern *Madison, WI*

- Created **CLI tools** implementing data partitions and concurrent local workers to support faster extraction of user-specified features from 5K+ individual NetCDF satellite observations, reducing the previous data processing time by **83%** (from 120 to under 20 minutes).
- Leveraged the same tools to conduct quality assessment on **15M+ radiance footprints** collected since the mission's launch, uncovering anomalies and potential calibration errors in higher-infrared sensors on the NASA PREFIRE satellites.
- Designed a cross-satellite data-mapping Python package using vectorized datasets and a spatio-temporal matching algorithm, correlating **40M+ individual measurements** across NASA PREFIRE and NOAA POES/MetOp missions in O(log n) time.

Biokind Analytics **Sep 2024 – May 2025**
Data Analyst *Madison, WI*

- Analyzed email engagement metrics (open rates, click-through rates, unsubscribe rates, and donor conversions), helping assess campaign performance, donor clusters, and retention and churn rates for the Village Diaper Bank (a non-profit).
- Collaborated with a cross-functional team of 17 undergraduates to design Tableau dashboards, providing stakeholders with actionable insights on fundraising strategies.

The Headstarter **Jul 2024 – Sep 2024**
Software Engineering Fellow *Remote*

- Collaborated with a remote team of 3 developers from around the world via Discord to develop web applications under aggressive weekly deadlines, while rapidly learning to integrate new development tools and libraries each week.
- Created projects utilizing React.js, Next.js, Tailwind, Material UI (MUI), Firebase, Vercel, and large language model APIs.

SEDS–Sxc **Mar 2021 – Feb 2024**
Research Scholar *Kathmandu, NP*

- Trained ARIMA, VAR, and Prophet **time series models** on open-source historical data for multivariate analysis of environmental factors affecting the air quality of Kathmandu city.
- Led the data preprocessing, including designing **ETL pipelines** for automating API data collection, implementing data-imputation algorithms, and developing modules to transform non-stationary time series to stationary using unit-root tests and differencing methods.
- Delivered a high-precision **35-day forecast** on Particulate Matter 2.5 concentration with a mean absolute percentage error of **0.097** and a root mean square error of **0.502**.
- Spearheaded the presentation of the findings at the Department of Environment, Government of Nepal, helping stakeholders identify patterns of air pollution in Kathmandu in relation to forest fires and meteorological factors.

Projects

Rent Predictor for New York City | *Scikit-learn, Django, JavaScript*

- Collaborated with a friend to develop a web application where users can find estimated rents in NYC boroughs based on **14 personalized specifications** using a multivariable regression model.

Early Marriage Prevention | *Scipy, Matplotlib*

- Conducted statistical analysis for tracking the trends of child marriage in different provinces of my home country using multivariate regression, identifying demographic-specific causes and intervention points, and presented the findings to students, researchers, and stakeholders.

Course Selling App Backend | *Express.js, Zod, JWT, Mongoose*

- Implemented a full-stack **RESTful** authentication workflow that supports user sign-in/sign-up using route handlers, middlewares, schema validation, and JSON Web Tokens (JWT), ensuring reliable authorization and session management.

Shortest Path Finder in UW–Madison Campus | *Java, Virtual Machine, HTML, CSS, JavaScript*

- Deployed a full-stack application on Google Cloud VM using a custom class-based implementation of **Dijkstra's algorithm**, allowing users to calculate and map the shortest path between different locations within the UW–Madison campus.

Skills

Programming Languages: Python, Java, TypeScript, HTML, CSS, SQL
Frameworks/Libraries: Express.js, React.js, Node.js, TensorFlow, Keras, PyTorch, Pandas, NumPy, Matplotlib, Scikit-learn, JUnit, Jest
Technologies/Tools: Git, Postman, Firebase, Vercel, Apache Kafka, Docker, Bash, AWS, MongoDB, PostgreSQL, Jira, Jenkins