Dipen Kumar Maheshwari

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Education

University of Alberta — Edmonton, CA
Bachelor of Science Honors in Computer Science – (GPA: 3.6 - First Class Standing) *Sep 2022 – May 2026*

Relevant Coursework: Python and Systems Programming, Databases, Formal Systems & Logic, Machine Learning, AI, Data Structures & Algorithms, Statistics, Image Processing

Experience

Summer Software/Research Intern — May 2024 – June 2024
University of Alberta - ANCL LAB *Edmonton, AB*

- Improved the overall structure and readability of code for autonomous navigation algorithms using the Robot Operating System (ROS), Linux, and C++.
- Initiated the containerization of the application using Docker, enabling out-of-the-box usability for other team members and reducing setup time by more than 50%.
- Utilized Git and GitHub for version control and collaboration, ensuring seamless team coordination and project management.

Projects

Bloom.ai | *Next.js, React, Typescript, TailwindCSS, MongoDB, Zod* | **GitHub** | **Live**

- Built Bloom.ai, a full-stack web application using Next.js, React, and TypeScript, implementing features such as anonymous feedback, email verification, and responsive UI components.
- Developed and optimized both frontend and backend, utilizing React hooks, context API, custom server middleware, Zod validation and Tailwind CSS, while deploying on Vercel with CI/CD integration.

BlogSpot | *React, Redux-Toolkit, HTML, Tailwind CSS, Appwrite* | **GitHub** | **Live**

- Developed a full-stack blogging platform using React for the frontend, integrated with Appwrite for user authentication and data storage.
- Implemented real-time user authentication flow using Appwrite's auth service, allowing for secure login, logout, and user data retrieval.

AudioScribe | *React, HTML, Tailwind CSS, Hugging Face Models and Transformers* | **GitHub** | **Live**

- Developed a dynamic web application leveraging React and Web Workers for real-time audio transcription and translation, utilizing advanced NLP models from Hugging Face for accurate and efficient language processing.
- Designed a user-friendly interface with responsive design, allowing users to easily transcribe and translate audio content with minimal delay and maximum accuracy.

Classification on NotMNIST-RGB and NotMNIST DL using CNN | *Python, PyTorch* | **GitHub**

- Developed and implemented a modified LeNet CNN for classification on the RGB NotMNIST dataset, optimizing architecture and weight initialization.
- Optimized object detection using sliding window detection on the NotMNIST-DL dataset, achieving a detection accuracy of 82.8% and classification accuracy of 97.53%.

Technical Skills

Languages: Python, JavaScript, TypeScript, C/C++, SQL (MySQL, SQLite), HTML, CSS

Frameworks/Libraries: React.js, Next.js, Node.js, Express.js Tailwind CSS, Numpy, PyTorch

Developer Tools: Git, Github, VS Code, Redux-Toolkit, Linux/Unix, Docker

Familiar/Learning: MongoDB, Java

Honors and Awards

University of Alberta - Faculty of Science - Dean's Honor Roll *2023-24*
University of Alberta International Admission Scholarship *2022*
University of Alberta Regional Excellence Scholarship *2022*