Chetan Pandey

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Education

- **Veer Madho Singh Bhandari, Uttarakhand Technical University**   Dehradun, India
  Bachelor of Technology in Computer Science · CGPA: 6.28   *Aug, 2023 – Present*
  - Awarded 3rd Place in UTKARSH 1.0 Hackathon & *Inovate or Evaporate Hackathon.*
  - Relevant Coursework: Linear Algebra, Probability & Statistics, Data Structures & Algorithms, Machine Learning, Deep Learning, Artificial Intelligence.

Experience

- **Vinci**
  Software Engineer Intern. *Advisors: Siddhant Singh*   *Feb, 2025 – Aug, 2025*
  - Integrated generative AI models into the application pipeline using **ComfyUI** and **FastAPI**, enabling **model inference** and orchestration from the backend.
  - Designed and implemented **scalable backend services** and **database schemas** to support ML-driven features.
  - Developed a **computer vision-assisted video editor** for creating any form of content with more granular control. Improved **content creation efficiency** by **23%** over state-of-the-art prompt-based methods. (Vinci Editor).

- **AK Digital Services**
  Software Engineer Intern. *Advisors: Alok Sinha*   *July, 2024 - Feb, 2025*
  - Migrated and refactored web stacks to modern React and Node.js versions, improving **performance by 45%.**
  - Optimized **REST APIs** and **implemented backend logic** used for A/B feature experiments**.**

Programming Skills

- **Programming Languages**: Python (4+ years), JavaScript (2+ Years), SQL (2+ Years)
- **Platforms/Tools**: ComfyUI, Hugging Face, Jupyter, Google Colab, PowerBI (basic), MATLAB
- **ML/Data:** PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, SciPy, OpenCV

Selected Projects

- **E-governance Management Platform:** Worked on a **Langchain** and **Computer Vision**-based platform for management, grievances, reports, and analysis. **AI-enabled** report creation, workload assignments, and review with analytical insights, data visualization tools, policy insight, and resolution suggestions. (Code, Demo Video)

- **Real-Time Traffic Analytics Tool**: Built a system that addresses the challenge of **real-time traffic analysis** by leveraging image processing and object detection. Created speed estimation, traffic law violation detection, and reporting to authorities. (Code)

- **Open Source Contributions**:
  - **Webpack:** Fixed error overlay appearing despite React error boundaries. (**PR #5431**)

    Enhanced test stability by **improving port allocation** and reducing **flakiness** in CI environments. (**PR #5433**)

    Redesigned error overlay UI for better usability and visual hierarchy, providing insight for future component extraction. (**PR #5441**)

Certifications & Courses

- **AWS Certified Cloud Practitioner**
  Amazon Web Services   *Apr, 2025*

- **CS50AI: Introduction to Artificial Intelligence with Python**
  Harvard   *Sep, 2021*

- **CS50: Introduction to Computer Science**
  Harvard   *Feb, 2021*

- **Machine Learning & Deep Learning Multiple Courses**
  Udemy / Wissenaire workshops   *2020-2023*

Position of Responsibility

- **ACM Student Chapter**
  Secretary.   *Aug, 2025 – Present*
  - Coordinated **technical** and **research-oriented events**, managed student outreach, and facilitated workshops on AI, data science, and cyberspace to promote research culture on campus.

- **National Cadet Corps (NCC)**
  Senior Division Cadet.   *Aug, 2023 - Present*
  - Attended the **Advanced Leadership Camp**, on October 2025.
  - Represented the **college unit** and participated in **leadership and discipline-based training** and community service programs.

Research-Relevant Strengths

- **Experimental mindset:** Experience running model comparisons and reproducible experiments.
- **Math foundations:** Exposure to linear algebra, probability, and statistics for ML model design.
- **Coding for research:** Proficient in rapid prototyping and production-grade model deployment.