

# HIMANK DAVE

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## Education

### University of Waterloo

Waterloo, CA

*Bachelor of Mathematics, Honours Co-op*

2027

- **Coursework:** Functional Programming, Algorithm Design and Data Abstraction, Tools and Techniques for Software Development, Object-Oriented Programming (C++)

## Experience

### Python Developer Intern

May 2023 – Aug 2023

*Cactus Creatives Pvt. Ltd*

*Ahmedabad, IN*

- Streamlined database queries in **PostgreSQL** via ORMs, while improving database schema.
- Analyzed large client datasets through **linear/logistic regression** and **outlier detection**, leading to over **25%** client savings and a **10%** client revenue increase.
- Implemented **APIs** with **Flask** and **REST Framework** in production with 750+ requests/day.
- Developed and maintained full-stack web applications in **HTMX**, **Django** and **REST Framework**.

## Projects

### Trivivo 🎮 | *HTML5/CSS3, Django, MySQL, REST Framework, AWS*

- Implemented *Who Wants to be a Millionaire* clone from scratch, deployed it to AWS EC2 instance.
- Built a responsive frontend using **HTML5/CSS3**, **Bootstrap** and **jQuery**, seamlessly integrated with **Django** and **MySQL** backend, while offering **RESTful API** for admin operations.
- Crafted interactive **admin dashboard** with real-time metrics, CRUD operations and detailed logs, optimizing game management by **45%**.

### SpectraSVD 📺 | *NumPy, OpenCV, Pillow, Streamlit*

- Wrote image compression algorithm using **low-rank approximation** with 25%+ size reduction.
- Employed **OpenCV** and **Pillow** for generating videos demonstrating image compression algorithm.
- Deployed an interactive webapp using **Streamlit**, allowing users to observe its impact on image quality and compression rate in real time.

### EcoWiz 🌱 | *React, Flask*

- Created a full-stack app classifying garbage based on organic, trash, or recyclable criteria.
- Developed frontend with **React** and backend with **Flask** for access to waste classification model.
- Developed **multimodal image classification model** via **ResNet-50 CNN** and **YOLOv8**, for classifying garbage with 80% accuracy.

### RedWish 🩸 | *Firebase, GCP, HTML5/CSS3, JavaScript*

- Designed and developed a website connecting donors, recipients, and blood banks.
- Built frontend with **HTML5/CSS3**, **Bootstrap**, and **jQuery**, and backend with **Firebase**.
- Utilized Google **DialogFlow** for a conversational AI chatbot, enhancing user engagement.

## Technical Skills

**Languages:** Python, C/C++, SQL, R, JavaScript, HTML5/CSS3, HTMX

**Frameworks:** Django, REST Framework, Flask, React, jQuery

**Libraries:** Pandas, Matplotlib, Plotly, NumPy, OpenCV

**Tools:** Git, Linux, Bash, Powershell, Postman, GCP, AWS, Jira