## **Academic & Personal Projects (Prashant Baral)**

### **1. Web Platform for ML Models**

**Date:** Jan 2021  
 **Description:** A unified web interface for deploying and interacting with various ML models for tasks such as heart disease prediction, diabetes prediction, glass type classification, forest fire prediction, and iris classification.  
 **Features:**

* Hosted multiple ML models including Random Forest, Naive Bayes, KNN, and Decision Tree
* Designed a clean UI for selecting and running predictions  
   **Technologies:** Python, Flask, HTML, CSS, Machine Learning

### **2. Food Pantry Analysis System**

**Date:** September 2024  
 **Description:** A data analytics and visualization system to help forecast donation and consumer demand trends for a food pantry.  
 **Features:**

* Performed Exploratory Data Analysis (EDA)
* Applied Time Series forecasting for seasonal demand
* Used XGBoost for inventory prediction  
   **Technologies:** Python, Pandas, Matplotlib, XGBoost

### **3. Diabetes Prediction System**

**Date:** Jan 2025  
 **Description:** A regression-based ML model to predict the likelihood of diabetes in patients, with a simple UI.  
 **Technologies:** Python, Pandas, Scikit-learn

### **4. Automatic Street Lighting System**

**Date:** Jan 2018  
 **Description:** An Arduino-based project that uses IR sensors to detect motion and automatically control street lighting.  
 **Features:**

* Lights turn on/off based on vehicle or pedestrian detection  
   **Technologies:** Arduino UNO, IR Sensor, LEDs, Breadboard

### **5. Online Placement System**

**Date:** Jan 2019  
 **Description:** A web platform for managing job placements and applications.  
 **Features:**

* User roles: Admin, Job Seekers, Employers
* Functions include job posting, application, approval  
   **Technologies:** PHP, MySQL, HTML, CSS

### **6. Personal Portfolio Website**

**Date:** June 2025  
 **Description:** An AI-powered portfolio website that showcases Prashant Baral’s professional profile, skills, and projects.  
 **Features:**

* Embedded AI Agent that answers visitor queries based on embedded content
* Clean UI with interactive sections for skills, services, and contact  
   **Technologies:** Python, Next.js, Tailwind CSS, TypeScript, PostgreSQL, OpenAI API (LLM)

### **7. Basic File Manager**

**Date:** May 2020  
 **Description:** A lightweight web-based tool for uploading, viewing, and managing files in the browser.  
 **Features:**

* AJAX-powered UI for asynchronous file handling
* CRUD operations  
   **Technologies:** PHP, HTML, CSS, JavaScript (AJAX), XAMPP