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ECE Corporate Partnerships

Purdue ECE Faculty Directory

Live Demo: <https://purdue-ece-faculty-frontend.vercel.app>

GitHub Repo: <https://github.com/omarahmedeg/purdue-ece-faculty>



1. Project Overview

This project is a web application that provides searchable information about Purdue ECE faculty members. The application retrieves data such as faculty names, personal websites, and research areas from the official ECE faculty pages.

The system supports two main functions:

1. Faculty Name Search:

- Input: Full or partial name (supports wildcards).
- Output: Faculty website and research area(s).
- Handles multiple matches when partial names correspond to several faculty.

2. Research Area Search:

- Input: A keyword or phrase describing a research area.
- Output: List of faculty members working in that area, with links to their Purdue profile pages.
- Supports root-word matching (e.g., “security” matches “secure” or “securing”).

2. Tech Stack:

Frontend

Uses Next 16, React 19, TypeScript, Tailwind and Shadcn for UI components.

Backend

Uses Node.js, Express.js framework, Natural for word stemming. Simple monolithic server that scrapes on start and stores data in memory and exposes a REST API for search and manual refresh.

3. Backend Structure & How to run

A simple Node.js backend used to collect and serve faculty data for the Purdue ECE project.

This repository contains a minimal server and a scraper script.

Files

- server.js — Express-style HTTP server (serves API endpoints).

- scraper.js — Script that scrapes faculty information and stores it locally.

Quick start

1. Install Node.js environment

2. Install dependencies:

```
npm install
```

3. Run the server:

```
node server.js
```

4. Frontend Structure & How to run

Uses Next.js app router directory structure, Shadcn-ready UI components, and Tailwind for Styling.

Quick start:

1. Install Node.js environment:

2. Install dependencies:

```
npm install
```

3. Run the server:

```
npm run dev
```

5. Deployment

Frontend

Deployed on Vercel, which offers a free Domain and Host.

Backend

Deployed on Google Cloud Platform (GCP), which offers a free tier of 300\$.