

PRASID BHUSAL

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EDUCATION

Texas Tech University

Lubbock, TX

Bachelor of Science in Computer Science, Honors College

Expected Graduation: May 2028

Coursework: Data Structures & Algorithms, Systems Design and Mathematics

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, TypeScript, SQL, HTML/CSS

Frameworks & Technologies: FastAPI, Django, Flask, Node.js, React, .NET

Databases & Infrastructure: PostgreSQL, Redis, Kafka, Docker

Cloud & DevOps: Git, GitHub, GitLab, AWS, Google Cloud Platform (GCP)

Libraries: NumPy, Pandas, TensorFlow, PyTorch, Matplotlib, pytest

EXPERIENCE

Undergraduate Research Assistant

Sep. 2025 – Present

Predictive Load-Shedding for Off-Grid SCADA | Texas Tech University

Lubbock, TX

- Developed a predictive load-shedding algorithm fusing OpenWeatherMap forecasts with a calibrated lead-acid discharge model to anticipate solar deficits.
- Designed the control logic with hysteresis and rolling-average filtering, reaching 95% decision consistency and under 0.1% false shutdowns across 500+ simulated scenarios.
- Cut depth of discharge 33% versus conventional low-voltage disconnect (LVD), extending estimated battery cycle life 50% in simulation.

PROJECTS

KickOff Alerts - FIFA | Python, FastAPI, BeautifulSoup, SendGrid, PostgreSQL | [GitHub](#) | kickoffalerts.com

- Built a ticket price-tracking platform polling all 104 FIFA World Cup 2026 matches every 15 minutes (10K price checks/day), persisting a time-series history in PostgreSQL for trend analysis.
- Shipped to production on Railway with a fully automated 24/7 scrape → store → alert pipeline (APScheduler); delivered 45+ real price-drop alerts to live users, validating the system end-to-end with actual demand.
- Engineered a threshold alert engine where users set per-match target prices, firing SendGrid notifications within one polling cycle (≤ 15 min) of a qualifying drop.

EzeLinks - URL Shortener | Docker, Kafka, Python, Redis, FastAPI, PostgreSQL | [GitHub](#) | [Ezelinks.com](https://ezelinks.com)

- Built a URL shortener serving redirects in 6ms p99 via a Redis cache-aside layer with TTL expiry and negative caching to absorb misses.
- Secured the API with JWT auth, PBKDF2 password hashing, and Redis sorted-set sliding-window rate limiting.
- Engineered an asynchronous analytics pipeline using Kafka to handle fire-and-forget click events, leveraging a worker service for GeoIP enrichment and batched, idempotent database inserts into PostgreSQL.
- Containerized 6 services with Docker; deployed backend on Railway and frontend on Netlify.

Kuik Resume - Resume Optimizer | Next.js, TypeScript, Python, PostgreSQL | [GitHub](#) | [Kuikresume.com](https://kuikresume.com)

- Built a full-stack resume optimization platform that analyzes job descriptions and rewrites resume sections via an LLM API, cutting manual tailoring time 80% and exporting to PDF, DOCX, and LaTeX.
- Engineered a split-view optimizer with before/after diffs and one-click apply, routing all AI calls through Next.js server-side handlers to keep API credentials off the client.
- Designed a FastAPI microservice for LLM orchestration backed by a Supabase/Postgres layer with UUID-keyed upserts for idempotent multi-device sync, plus OAuth sign-in (GitHub, Google, Facebook).