

Bhavya Vashisht

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EDUCATION

Thapar Institute Of Engineering and Technology <i>Bachelor of Engineering in Electronics and Communication Engineering</i> CGPA: 8.79	Patiala 2022 – 2026
Shalom Hills International School <i>CLASS XII (PCM with CS) CBSE 95.8%</i>	Gurugram 2020 – 2021
Shalom Hills International School <i>CLASS X CBSE 96.33%</i>	Gurugram 2018 – 2019

SKILLS

Languages: Go, Python, C, C++, Matlab, SQL, HTML/CSS
Databases & Tools: PostgreSQL, SQLC, Goose
Frameworks & Libraries: bcrypt, database/sql, PyTorch, NumPy, Pandas, Matplotlib
Templating & CLI: cobra, argparse, Jinja2
Developer Tools: Git, VS Code, Visual Studio, Jupyter Notebook
Coursework: Data Structures & Algorithms, DBMS, OOP, Computer Architecture, AI, Embedded Systems
Certifications: HTTP Clients in Go, Learn Linux, Learn OOP in Python, Learn Go

PROJECTS

- Chirpy** | *Go, PostgreSQL, JWT, Webhooks, Swagger, Bcrypt* [GitHub](#)
- Designed **modular HTTP backend** with route groups, middleware, and stateless **JSON-based REST API architecture**.
 - Developed full **JWT-based authentication** with access/refresh tokens, **bcrypt password hashing**, and **role-based access** (3+ user roles).
 - Integrated **PostgreSQL** using database/sql and **schema migrations**; stored **500+ user/session records** in testing.
 - Added **webhook verification**, **panic recovery**, and **CORS middleware**; tested **10K+ requests** with **<1% failure** using load simulation.
- Nano-LLM** | *Python, Pytorch, BPE Tokenizer, enwik8* [GitHub](#)
- Constructed a **GPT-2 style transformer** (~125M parameters) from scratch, covering **tokenization**, **multi-head self-attention**, **layer normalization**, and **causal loss**.
 - Trained on 100K tokens from enwik8 over **10K+ steps**; achieved **30% reduction in loss** from initialization
 - Integrated **Byte Pair Encoding (BPE)** for subword tokenization and utilized **top-k and temperature sampling** to generate 30+ syntactically diverse, context-aware text completions.
- Gator** | *Go, XML (RSS/Atom), REST API, HTTP clients* [GitHub](#)
- Built **CLI tool** to fetch, parse, and store **100+ RSS feeds** using **concurrent** worker pools and **goroutines**.
 - Parsed and cached **5000+ articles** across multiple runs; constructed **TTL logic**, **feed de-duplication**, and metadata tagging.
 - Exposed feed data via **REST endpoints** with **filtering**, **sorting**, and **pagination** support using query params.
 - Optimized fetch throughput by **40%** compared to sequential polling through benchmarked runs.
- Static Site Generator CLI** | *Python, Markdown, HTML, YAML, Jinja2* [GitHub](#)
- Created **CLI tool** to convert 50+ Markdown files into **semantic HTML pages** using templating, metadata parsing, and **custom layouts**.
 - Implemented **recursive directory scanning**, **YAML front matter parsing** for metadata (title, slug, date), and custom layouts for template builds.
 - Delivered **<2s** build time for 100+ content pages; supported blog/portfolio use cases with **configurable output directory**.

ACTIVITIES

ACM Thapar Chapter

Member

- Pioneered a mentorship program within the ACM society, pairing 10+ experienced members with newer students to provide guidance and support and foster a stronger sense of community within the club.