

Khizar Irshad Chaudhry

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Education

Technical University of Denmark (DTU)

B.Eng. in Computer Engineering

2800, Kongens Lyngby

Expected, December 2028

NEXT Sukkertoppen Gymnasium HTX

Mathematics A Physics A

2500, Valby

Graduated, June 2026

- Grade: **10.2/12** ($\approx 3.7/4.0$ GPA)

Projects & Experience

Neptel — Python, LangChain, Next.js, JS, TS, FastAPI, Docker, Hugging Face

[Neptel.dk](#) [🔗](#)

Co-founder @ Neptel

- Co-founded a private **GenAI platform** focused on data sovereignty and privacy, deploying private **LLMs** with OpenAI-compatible APIs, quantized model serving, and **LangChain** orchestration.
- **Agile-developed** a scalable **FastAPI** backend for on-prem GPU infrastructure and optimized LLMs using **(Q)LoRA fine-tuning** and **quantization** for GPU-efficiency, reducing VRAM requirements by **35%**.
- Integrated **RAG** with LangChain and vector databases for domain-specific Q&A, using **Python, Next.js, JS, TS, Docker, Hugging Face**.

Quantum Physics Research (High school project) — L^AT_EX, Python, Matlab

[Thesis paper](#) [🔗](#)

Technical University of Denmark & NEXT Sukkertoppen HTX (SOP project)

- Conducting research for my final-year project on entanglement and quantum non-locality at **DTU Nanolab**.
- **Analyzed** collected data using **Python**, applying **statistical methods** to identify patterns and deviations.

QM Simulation of Hydrogen Orbitals — Python, GLSL, NumPy, OOP

[GitHub](#) [🔗](#) [Docs](#) [🔗](#)

- Built an interactive **quantum mechanics visualization** of hydrogen orbitals using $\psi(n, l, m)$.
- Implemented **CDF-based sampling** to convert continuous probability distributions into particle positions.
- Developed low-level **OpenGL GPU rendering pipeline** using VAO, VBO and custom **GLSL shaders**.

Automatic Vehicle Registration Lookup — Computer Vision, OpenCV, SQL

[GitHub](#) [🔗](#) [Docs](#) [🔗](#)

- Built an **ALPR system** using **YOLO** for license plate detection and OCR for text recognition.
- Integrated **REST API** vehicle lookup with **SQLite** storage, regex validation, and multithreaded processing.

Snake on Arduino — Arduino, C/C++, Embedded Systems, Sensors

[GitHub](#) [🔗](#)

- Developed an **embedded Snake game** on Arduino with 8x8 LED matrix and **IR remote** controls.

Sales Consultant — Sales, Communication, B2B, Negotiation

2025 - 2026

Telenor A/S

- Achieved a monthly **cross-selling rate of 48%**, among the highest in the region.
- Closed **128 sales** in a month, achieving **2nd place at Telenor Denmark**.

Youth President — volunteer work, leadership, fundraising

2023 - Currently Working

DMC - non-profit organization

- Organize weekly Sunday gatherings to foster youth development and community engagement.
- Led fundraising efforts generating **6M+ DKK** in total for our upcoming cultural center.

Tutor — mathematics, physics, chemistry, coding

2024 - Currently Working

Private & MentorDenmark

- Mentored high school students in **STEM** subjects, improving academic performance by $\approx 40\%$.

Additional Information

Languages: English, Danish, Urdu, Hindi, Punjabi & Baluchi

Volunteer Work: [Science Akademiet](#) [🔗](#), [SATH](#) [🔗](#), DMC & [WCA](#) [🔗](#)

Skills: Python, C/C++, SQL, RAG, LangChain, Hugging Face, Next.js, Git, Docker, Kubernetes, Azure

Interests: Fitness, travelling, (quantum) physics, simulations, robotics, AI/LLM, tutoring & astronomy