Owais Ali Khan

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EDUCATION

FAST NUCES
Bachelors of Science in Computer Science, 3.89 CGPA
July 2025, Karachi Pakistan
ex-PROCOM, ex-DevDay

ACHIEVEMENTS

- Gold Medallist ICPC Asia Topi Regional '24-25 (National 4th rank)
- Silver Medallist ICPC Asia Topi Regional '23-24 (National 8th rank)
- Ranked 531/4200, IEEE Xtreme Programming Competition 17.0 (Global 531st rank)
- Rector's List (Spring '22)
- Dean's List (Fall '21, Fall '22, Spring '23, Fall '23, Spring '24, Fall '24)

SKILLS

LANGUAGES
Python • C/C++ • Java • JavaScript/TypeScript • Dart

LIBRARIES/FRAMEWORKS
Django • Flutter • NodeJS • ExpressJS • Flask • Bootstrap5 • Material UI • CMake • CUDA

PRODUCTIVITY
Git • Linux (Debian-based) • Zsh/Bash (Shell Scripting) • Vim • Markdown • LaTeX • Figma

DATABASES
MySQL • PostgreSQL

DEVOPS
Docker • Jenkins (CI/CD)

VOLUNTEERING & COMMUNITIES

- IEEE Membership (Dec '23 - Dec '24)
- Procom '23 Co-head CS Competitions (Jan '23 - Mar '23)
- Procom '22 Co-head Math Olympiad (Jan '22 - Mar '22)

EXPERIENCE

SECURITI AI | Software Engineer Intern
June '24 - Aug '24 | Hybrid

- Engineered a high-performance infrastructure for matching large-scale *regular expressions* using state-of-the-art tools i.e. **Intel Hyperscan** and **Google RE2J**, resulting in performance speedups of 2-3 factors of magnitude.
- Integrated advanced *open-source* tools into existing systems to enhance the efficiency and accuracy of *content classification* workflows.

RETROCAUSAL AI | Applied Research Intern
Mar '24 - June '24 | Remote

- Developed automated workflows and *RESTful* API endpoints for reporting and exporting internal data models using the **Django REST Framework**.
- Designed and implemented cloud-based **(Amazon S3)** solutions for *scalable* storage and retrieval of standarized data reports.

LDP LOGISTICS | IT Support Specialist
June '23 - Sep '23 | Onsite

- Built and deployed a full-stack *web application* (**Django** and **Bootstrap4**) for managing the status and location of electronic *inventory* owned by the company in local and overseas offices.
- Acted as the primary IT *solutions provider* and technical officer, supporting all in-house teams with *infrastructure*, *troubleshooting*, *system modifications* and *hardware procurement*.

PROJECTS

POLARIS | High-performance Image processing application
Fall 2023 | Parallel and Distributed Computing (Project)

- Designed and developed **Polaris**, a *parallelized* image enhancement program. Polaris performs standard image enhancement techniques (i.e. **Gaussian filtering** and **Histogram Equalization**) in order to *sharpen* image quality and increase *contrast* in dark images.
- Polaris is written in **C++17** and uses the open-source *multiprogramming* framework **OpenMP** to utilize all available *CPU cores* for image processing.

LDP ASSET MANAGER | Inventory Management System
Summer 2023 | Full Stack Development

- Developed an *inventory management system* using **Django**, **MUI**, **JQuery**, **MySQL**, **Apache HTTP Server**, **Bootstrap4**
- The main function of this project is to act as a *web portal* that keeps track of all the inventory (assets, accessories, licenses, etc) held at all *LDP* offices.
- Deployed the finished web application on **Dreamhost**

TAGGER | Data Extraction and Analysis
Spring 2024 | Information Retrieval (Project)

- Created a tool that uses *Azure* services (**SpeechService** and **TextAnalytics**) to *transcribe* video and extract *NamedEntities* (i.e. landmarks).
- Also created a *search* mechanism for the recognized entities from an existing *knowledgebase* (i.e. Tripadvisor).