

# Maher Athar Ilyas

Full Stack Machine Learning Engineer

📍 Ankara, Turkey

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## EDUCATION

**B.Sc. Computer Engineering** - Bilkent University, Ankara, Turkey

Expected Graduation - 2024

CGPA 3.70

- **High Honor** International Student with **Full Merit Scholarship**.
- Algorithms, Object Oriented Software Engineering, Database Systems, Programming Languages, Computer Organization, Engineering Management, Linear Algebra, Probability and statistics.

**B.Sc Computer Science Exchange Semester** - University of Saarland, Saarbrücken, Germany

April 2023 - Sep 2023

- High Level Computer Vision, Machine Learning, Foundations of Web Security and Ethics for Nerds

## WORK EXPERIENCE

**Research and Development Full Stack Engineer** - Python, Celery, Scala, Angular, Selenium & RabbitMQ

July 2023 - Present

TestFabrik

Remote / Saarbrücken, Germany

- Developed a specialized micro service for **automated WCAG violation detection** using OpenAI APIs, prompt engineering and few shot learning.
- Targeted points traditionally challenging for static coding methods, involving **in-depth research** and extensive experimentation.
- Collaborated closely with the product manager on **beta release planning**, use case development, UX design, and overall **product strategy**.

**Full-Stack Developer** - React.js, Spring Boot, Figma, REST API & PostgreSQL

June 2022 - July 2023

LAYERMARK

Remote / Washington, D.C

- Introduced innovative business rules management solutions with Drools, enabling **expansion opportunities** in existing products
- Implemented optimized multiple back-end services with cache management using Java Spring, resulting in a **60% increase in response speed**.
- Accelerated front-end development and maintenance **time by 70%** by rebuilding UI with custom UI components in React.js
- Developed comprehensive **API collections** in Java Spring and corresponding front-end pages utilizing Ant Design and DevExtreme.

**Automated Trading Systems Developer** - Python, PyTorch & TensorFlow

Sep 2021 - June 2023

Fiverr & Upwork

Remote / Online

- Successfully designed and deployed **75 + highly effective crypto trading bots**, receiving exceptional customer reviews with a **perfect 5/5 rating**.
- Integrated **web scraping** techniques and **APIs** from top platforms like Binance, Kucoin, Discord, CoinMarketCap and Telegram.
- Leveraged Python data structures for data synchronization, portfolio management, smart notifications, and real-time technical analysis.
- **Back-tested** trading strategies involving TA-indicators on historical candle data, and delivered PNL reports along with optimization plans.

**Graphic Designer and Social Media Manager** - CorelDraw, Adobe Premiere Pro & Social Media Marketing

Jan 2018 - Aug 2020

AL-HUDA Educational Institute

Lahore, Pakistan

- **Illustrated 72 workbooks** and school magazines for primary classes using CorelDraw.
- Planned and executed a social media marketing campaign resulting in **2.1k+ Facebook followers** and **10k+ YouTube subscribers**.

**Curriculum Development Intern** - CorelDraw & Microsoft Office

Jun 2019 - Aug 2019

Care Foundation

Lahore, Pakistan

- Revised annual SMART curriculum for underprivileged middle-school students.
- Recognized with the **Best Intern Award** for outstanding creativity and work ethic among a cohort of **25 interns**.

## SKILLS

**Front-end:** Next.js, React.js, ANT Design, DevExtreme, Angular, REST APIs, Figma, CSS, HTML, Tailwind.css, Bootstrap, XML, JSON & jQuery,

**Back-end:** Spring Boot, Java, Django, Scala, Python, Selenium, Celery, RabbitMQ, PostgreSQL, MySQL, C++, PHP, Docker, Drools and Fast API.

**Machine Learning:** OpenAI API, LAMA 2, NLP, CNN, LLM, PyTorch, TensorFlow

**Miscellaneous:** Ethical Hacking, Git/ GitHub, CorelDraw, Adobe Premiere Pro, Android Studio, Google Analytics & Facebook Ads.

**Languages:** English (C2), Urdu(C2), Hindi (C1), Turkish (B1) & German (A1)

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## PROJECTS

### **WePrep** - LLMs, NLP, HV, CNN, Next.js, Fast API, MongoDB, JavaScript, Python

- Engineered a user-friendly web application for AI-assisted interview, meeting, and public speaking preparation, integrating the latest advanced LLMs, NLP, and CNN models after fine-tuning and task-based optimization for enhanced performance.
- Incorporated OCR and Audio-to-Speech technologies, enabling users to practice with context-based questions and realistic mock interview.
- Implemented comprehensive analysis features, evaluating emotions, body language, confidence, fluency, and speech trends. ([GitHub](#))

### **Campus Connect** - Next.js, MUI, Spring Java, Figma, Hibernate, PostgreSQL

- Designed and deployed an all-in-one exclusive social network tailored for the university community, facilitating transactions for second-hand sales, lost and found items, borrowing, donations with all related features such as chat, forums, content moderation and smart search. ([GitHub](#))

### **Image Search for E-Commerce** - Python, Tensorflow, CNN, Jupyter Notebook

- Developed a visual search system for e-commerce using Siamese Networks, VGG19 and multiple image augmentation techniques.
- Curated a triplet dataset from Exact Street2Shop, Fashion-MNIST, and web-scraping to achieve an impressive accuracy of 92.66%. ([GitHub](#))

### **BilCargo** - React.js, ANT Design, CSS, Spring Boot, MySQL, REST APIs, Postman

- Developed a web-based logistics management system with CRUD operations, search and filtering, and report generation functionality.
- Implemented a secure BCNF-normalized ER database model with user specific custom data access privileges. ([GitHub](#))

### **Habinet : Social Media of Productivity** - Java, JDBC, MySQL, Swing, Database Management

- A gamified habit tracking desktop application with integrated social media features such as groups, group chat, leaderboards, past trends & habits visualizing graphs and to-do list, deployed with a server hosted database. ([GitHub](#))

### **Personal Website** - HTML, CSS, Bootstrap, JavaScript, jQuery, PHP, Git, Github Pages

- An online mobile-friendly and responsive resume website, styled and animated using CSS, Bootstrap and Javascript.
- Hosted on Github Pages and maintained using Git. ([atherrrrr.github.io](#))

### **Smart-Music Player App for Android** - Java, XML, Android Studio

- Created an android application with an animated UI design using XML and Java that plays .mp3 music files.
- Implemented a music playback feature that groups songs based on user preferences and current mood.

### **Simplified 32-bit Programmable Processor** - SystemVerilog, Vivado, MIPS Assembly

- A five instruction processor implemented for Basys-3 FPGA board using simplified datapath and controller.

## LEADERSHIP EXPERIENCE

- **Table Tennis Team Captain:** Runners up in Angora Cup 2021 and Regional Table Tennis Champion in 2019 2018-2020 & 2022- Present
- **Active Member at ESN Bilkent:** Planned and managed orientation week for 100+ international exchange students. Jan 2023 - Present
- **Vice-President/ Board Member at Bilkent United:** Organized multiple sports tournaments and screenings with 200+ participants and coordinated the recruitment and activities of a team of 20 members. Aug 2021 - Aug 2023
- **House Captain in High School:** managed trials and tournament participated for a student body of 80+ students May 2019 - May 2020

## HONORS & AWARDS

- **2nd Runner-up** out of 700+ participants in Business simulation event judged by **Pepsico, P&G, EY, Armut and Audi.** - BusinessPoint'22
- **Cambridge Outstanding Learners Award** for Regional Distinction in Computer Science Exam (O-Level) - British Council
- Maintained a position on the University's **High Honor Roll** throughout all semesters. - Bilkent University
- **Valedictorian** with 4.0 GPA (AS & A-Level) in High School. - Beaconhouse School System
- National Intel Science Fair **Best of Category Winner** for Project: Earth Battery: Electricity with mud. - ISEF
- **National English Contest Winner in Pakistan** in 9th Grade. - GSEA Pakistan