

EMRE GENCER

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Department: Computer Science

EDUCATION & QUALIFICATIONS

Robert College, Istanbul / Turkey

Sept 2019-Jun 2024

GPA (12th Grade): 96.38

GPA (11th Grade): 95.98

GPA (10th Grade): 94.31

GPA (9th Grade): 95.67

AP

Chemistry: 5

Macroeconomics: 5

Microeconomics: 5

Calculus BC: 5

Physics C: Mechanics: 5

Physics C: Electricity & Magnetism: 5

Computer Science A: 5

SAT (October 2023): 1520 (R&W: 730, Math 790)

SAT (March 2023): 1530 (R&W: 740, Math 790)

SAT (December 2022): 1420 (R&W: 680, Math 740)

SAT (September 2022): 1490 (R&W: 690, Math 800)

TOEFL (December 2023): 109 (L: 25 R: 30 W: 25 S: 29)

TOEFL (October 2023): 103 (L: 26 R: 28 W: 24 S: 25)

SUMMER SCHOOLS AND ONLINE COURSES

Oxford/ Cambridge Research Skills Intensive Course, Online, 12th Grade, 3 hrs/wk, 5 wks/yr **Jun-Jul 2023**

Student; Enrolled in the program to gain further knowledge on ways to write and complete effective research papers independently.

- Familiarized with the research process and its steps, namely choosing a project focus, research methods, and finding sources.
- Flourished skills in finding and evaluating credible evidence in line with the CRAAP test, as well as creating formal bibliographies.
- Deepened my understanding of the structuring of a research paper by familiarizing myself with writing solid introductions, body paragraphs, and conclusions.
- Developed and applied critical thinking, analytical skills, experimental design, and persuasive writing techniques.
- Received the certificate of completion.

Education for Innovation Foundation, Statistical Methods in Scientific Research Course, Cerrahpasa University,

Istanbul University & SOIL, Online, 11th Grade, 7 hrs/wk, 3 wks/yr

Jul 2022

- Gained a basic understanding of statistics in the context of scientific research by enabling for interpretation of research data, explanation, and application of different types of variables.
- Introduced to the process of statistics-based research and prepared steps for research.
- Practiced SPSS and PSPP programs together with statistical analysis and complex calculations, covering statistical models and complex testing models.
- Successfully completed a final exam at the end of the course to earn a certificate of success.

Education for Innovation Foundation, Machine Learning, Online, 11th Grade, 6 hrs/wk, 3 wks/yr

Jul 2022

- Gained knowledge of the fundamental concepts and the underlying principles of machine learning algorithms, including supervised and unsupervised learning, deep learning, and reinforcement learning

- Covered techniques for feature selection and engineering, emphasizing the essence of input data and ultimately the model's performance
- Applied the learning outcomes of the course by training and creating an ML machine that can distinguish between distinct types of images
- Demonstrated a solid grasp of machine learning principles through a final project, earning a certificate of completion.
- Received the certificate of completion.

Education for Innovation Foundation, Computer Vision Course, Online, 11th Grade, 6 hrs/wk, 3 wks/yr Jul 2022

- Explored the fascinating field of computer vision, delving into the principles and applications of image and video analysis.
- Gained a strong foundation in computer vision techniques, including image processing, feature extraction, object detection, and image classification.
- Acquired experience with libraries for computer vision, allowing for the implementation of image recognition and analysis algorithms.
- Implemented the knowledge to contribute to creating a computer vision algorithm that converts grayscale images to RGB
- Demonstrated a solid grasp of computer vision principles through a final project, earning a certificate of completion.
- Received the certificate of completion.

Education for Innovation Foundation, Blockchain Course, 11th Grade, 6 hrs/wk, 3 wks/yr Jul 2022

- Acquired a comprehensive understanding of blockchain technology and its applications in various industries, including finance, supply chain, and cybersecurity.
- Explored the fundamental concepts of distributed ledger technology, smart contracts, and decentralized systems.
- Gained practical experience in using blockchain platforms and tools to create, manage, and analyze blockchain networks.
- Successfully completed coursework in blockchain security, consensus mechanisms, and decentralized applications, enhancing proficiency in the field.
- Demonstrated a solid grasp of blockchain principles through a final project, earning a certificate of completion.
- Received the certificate of completion.

**Harvard CS50x: Introduction to Computer Science, Harvard University, Online 2022-2023
10-11th Grade, 5 hrs/wk, 10 wks/yr**

- Completed weekly labs and rigorous problem sets to enhance knowledge and understanding of the course, further sharpening skills for problem-solving and optimizing code for efficiency and performance
- Enhanced understanding and implementations of programming languages such as C, Python, HTML, and CSS, developing distinct algorithms varying from data sorters to game simulations
- Introduced to and applied programming languages such as SQL, and JavaScript, improving skills and versatility
- Explored a variety of CS subjects from web development and databases to cybersecurity and AI.
- Actively engaged in online discussion forums and collaborated with a diverse group of learners in weekly Labs, fostering teamwork and communication skills
- Successfully coded a Chrome Web extension that enables users to convert between different currencies, taking into account the live exchange rate, as the final project to finish the course.
- Received the certificate of completion.

Kadir Has University, Augmented Mechanics Course, Online, 10th Grade, 10 hrs/wk, 2 wks/yr Jul 2021

Student; Enrolled in the program to gain knowledge about high-school-level mechanic physics and further display my understanding with a diploma.

- Deepened my understanding of 15 main physics subjects and was able to solve advanced problems under the lecturing of Prof. Dr. Nihat Berker.
- Completed two graded quizzes, followed by graded assignments after the lesson that contributed to the overall course score each day.
- Applied calculus and related mathematical knowledge to physics problems and theorems.
- Received the certificate of Success.

Java Programming: Solving Problems With Software (Coursera), Duke University, Online

10th Grade, 3 hrs/wk, 5 wks/yr Mar-Apr 2021

Student; Enrolled in the program to be introduced to the Java programming language and to be able to properly and efficiently use it on my coding projects.

- Followed the video lectures provided by Prof. Owen Astrachan, Assoc. Prof. Andrew D. Hilton, Robert Duvall, and Prof. Susan H. Rodger of Duke University.
- Gained knowledge about fundamental Java Syntax and Semantics, CSV files, and basic statistics in the Java programming language.
- Improved my understanding of the basics of programming such as the functioning of variables, construct methods, iterations, and usage of Java documentation.

- Completed required assignments regarding the usage of Strings in Java such as finding patterns in the string data.
- Completed a project to finish the course that compared different baby names' popularity over time in the United States, by relying on the data regarding the popularity of different baby names from the past.
- Received the certificate of Successful Completion with a grade of 86.52%.

Sabancı University, Istanbul/ Turkey, Winter Program, Online, 9th Grade, 5 hrs/wk, 2 wks/yr Jan-Feb 2021

Student; Enrolled in the program to expose myself to a variety of disciplines and improve my general knowledge.

- Took an intensive course on Quantum Physics to enrich my understanding of basic quantum physics phenomena and deepen my knowledge and understanding of the subject.
 - Participated in the lessons lectured by Sabancı University academician Dr. Zafer Gedik.
 - Gained knowledge about prominent quantum physics phenomena such as parallel universes, the Einstein-Podolsky-Rosen paradox, Schrödinger's cat theory, quantum mechanics, the speed of light, black holes, and quantum computers.
- Took an intensive course on Global Macroeconomics which introduced me to the fundamentals of global macroeconomics.
 - Participated in the lessons lectured by Sabancı University Macroeconomics Lecturer Sinem Sönmez.
 - Got introduced to concepts related to the functioning of the global economy such as capital flows, exchange rates, current account balance, effects and applications of monetary and fiscal policies, and financial crises.
 - Completed homework assignments regarding reading and analyzing economic articles and answering quiz questions given by the lecturer.
- Took an intensive course on Machine Learning and AI to learn the basics, fundamentals, and the history of Artificial Intelligence.
 - Participated in the lessons lectured by Prof. Dr. Berrin Yanıkoğlu.
 - Understood the concepts of image/voice/handwriting recognition and further studied their functioning and correspondence with machine learning.
 - Focused on algorithms enhanced by machine learning to observe how the machine can learn and interpret the fed data, and further use it to enhance its algorithm.
 - Realized that AI technology is encompassing a greater part of our lives and industries worldwide by looking into AI's applications in the past and its current applications.
- Received the certificate of Success and completion.

RESEARCH PROJECTS

CV for Medical Conditions, Istanbul Cerrahpasa University, 12th Grade, 4 hrs/wk, 14 wks/yr Jul-Nov 2023

Researcher; Completed a research project titled: "The Role of AI-Enhanced Medical Computer Vision in Diagnostic Automation" supervised by Prof. Dr. Ruya Samli and published in the "Journal of Next Frontier for Life Sciences and AI" (2023 Volume 6 Issue 2).

- Was mentored by Oxford Tutor Joseph Young in the process of collecting sources and writing the research paper
- Examined a variety of recent sources from academic journals and publications to deepen understanding of the research subject
- Investigated the implementation and benefits of medical computer vision methods on the detection and classification of conditions from medical images
- Was introduced to several prominent CV methods used in the medical field, such as CNNs and Vision Transformers, and their branching techniques, such as image processing and segmentation
- Expanded my understanding of and envisioned how computer systems have contributed to medical diagnosis in the past, present, and future of the field.

Essence, Benefits, and the Continuous Evolution of Cloud Computing in Big Data Analytics, Bogazici University, Istanbul/ Turkey, 12th Grade, 5 hrs/wk, 12 wks/yr Nov 2023- Jan 2024

Researcher; Worked on a research titled: "Essence, Benefits, and the Continuous Evolution of Cloud Computing in Big Data Analytics" under the supervision of Prof. Dr. Tuna Tugcu;

- Reviewed a range of recent sources from scholarly journals and publications to enhance comprehension of the research topic.
- Investigated the core principles and the significance of cloud computing in the context of big data analytics to understand its essence in the field.
- Explored the practical benefits of employing cloud computing in big data analytics, including cost-efficiency, scalability, and accessibility to vast computing resources.

- Researched the ongoing evolution and emerging trends in cloud computing technologies and their relevance to the field of big data analytics.

WORK EXPERIENCE

Machine Learning Applications, Mastercard, Online, 12th Grade, 10 hrs/wk, 8 wks/yr **Sept 2023-Present**

Intern; Did an internship to gain practical experience in exploring how ML tools are applied in the functioning of Mastercard as well as examining the company's organizational structure.

- Explored the usage of AI-powered algorithms in the detection of payment processing/credit card frauds.
- Conducted an in-depth SWOT analysis of Mastercard, thoroughly examining key elements such as the company's historical background, mission, and future outlook.
- Assessed Mastercard's global and local market positioning, its competitive standing within the industry, and the overall market landscape.
- Explored the composition and management of its talent pool, as well as its approach to lean innovation and research and development strategies.
- Examined the company's methods and tactics for marketing, diversity and inclusion initiatives, and engagement in social responsibility efforts. Also, evaluated Mastercard's alignment with the UN Sustainable Development Goals.

Salesforce Inc., Online, 12th Grade, 15 hrs/wk, 4 wks/yr **Jun 2023**

Data Analysis & Synthesis Intern; Completed an internship to gain practical experience in working with data and AI tools to examine a variety of fields mainly innovation (R&D), finance, marketing, and operating within the scope of Salesforce.

- Examined the application of AI tools for marketing campaigns
- Completed detailed and insightful analysis for Salesforce on several essential aspects including the company's history, mission, future projection
- Examined Salesforce's global and local market presence considering its methodology and marketing strategy
- Assessed the stance and status of Salesforce within the payment-processing industry in the context of competition and market climate;
- Explored the organization of mind force and workforce of the company in conjecture with its lean innovation and R&D strategies;
- Evaluated the diversity, inclusion, and social participation strategies alongside the company's conformity to UN Sustainable Development Goals.

COMMUNITY INVOLVEMENT PROJECTS

TOK-TUT Visual Computing based Community Project for the Earthquake Victims, 11-12th Grade, 5 hrs/wk, 35 wks/yr **Feb 2023 - present**

CoFounder, CoDeveloper, Data Analyst;

- Co-founded and co-developed the TOK-TUT Visual Computing-based Community Project to aid earthquake victims in Turkey, demonstrating strong leadership and problem-solving skills.
- Led the acquisition, processing, and display of visual information, including images, videos, and QR codes, to facilitate and promote donations for earthquake relief efforts.
- Helped to execute the control, maintenance, and service processes of the established water treatment plants in container cities.
- Contributed to the collection of an impressive USD 2 million in donations, demonstrating a strong ability to mobilize resources for humanitarian initiatives

ESET: Elementary School English Tutoring CIP 2021, Online **Nov 2021-Jan 2022**

Tutor; Volunteered the program to support the community by assisting primary school students on their journey of learning a foreign language for the first time.

- Interactively taught English to a group of 15 elementary school students for 7 weeks.
- Organized and prepared fun online activities, quizzes, and interactive sets.
- Prepared educatory and amusing slides to enhance the sessions with the elementary school students

STEM4FUN 2021, Online, 9th Grade, 10 hrs/wk, 2 wks/yr **Jun 2021**

Tutor; Volunteered the project to get involved in community service by fostering an interactive experimental working environment to support middle-school students in their journey of learning science

- Covered and taught 5 different science subjects from the 6th grade MEB curriculum to 10 middle school

students in a 2-week span.

- Organized and prepared experiments, also demonstrated to students how to prepare the experiments themselves, from Zoom
- Prepared educatory slides that are accurate to the relative science subjects and experiments for the students to enroll and understand better
- Ensured the equipment needed for the experiments was sent to and received by the students.

EXTRACURRICULAR ACTIVITIES

Hackathon 2023 - Find Solutions 4 the Future, Education for Innovation, Online

12th Grade, 5 hrs/wk, 10 wks/yr

Jul-Oct 2023

Competitor; Designed “Visiosoft” - a startup software that ensures citizens’ security by extracting pertinent information from camera footage by utilizing Transfer Learning.

- Focused on leveraging various sophisticated AI models to provide a comprehensible solution that can accurately extract any kind of information from camera footage, and ultimately warn necessary services in any case of burglary or assault.
- Aimed to enhance security measures, promote safety, and contribute to a more secure environment by improving the infrastructure.
- Won 1st place Award on UN Sustainable Development Goal ‘Good Health and Wellbeing’.
- Won 1st place Award in the category “Human-Centered Artificial Intelligence”.

Robert College Efficiency Challenge (RCEC), Robert College, 11-12th Grade, 4 hrs/wk, 36 wks/yr 2022-Present

Competitor; Participating as the “second captain” in the TEKNOFEST High School Efficiency Electric Vehicle Competition with the Robert College “RC Efficiency Challenge (RCEC)” team, and the vice president of the mentioned RCEC club in school.

- As the vice president managed and organized the workload for which the other team members worked for
- Worked collaboratively with the mechatronics department of the club and was involved in the essential technical aspects of the designed electric vehicle, most essentially electronic differential systems, steering systems, and the electric motor.
- Completed the Technical Report Document for the TEKNOFEST 2023 - High School Efficiency Challenge Electric Vehicle Competition and passed the first stage by doing so.

Hackathon 2022 - Social Innovation and Solidarity, Education for Innovation, Online

11th Grade, 5 hrs/wk, 10 wks/yr

Jul-Sept 2022

Competitor; Designed “Hydroport” - a startup that aims to reduce the number of people in need of clean water by sending filtered water via water-carrying autonomous vehicles.

- Focused on providing a technological, digital, and innovative solution by constructing the project based on AI and ML-based software, an automated transfer system and an online database supported by satellite data as well as the use of automated transfer vehicles powered by sustainable energy.
- Won 1st place Award on UN Sustainable Development Goal ‘Social Innovation’.
- Won 1st place Award on UN Sustainable Development Goal ‘Clean Water and Sanitation’.

Robert College Model United Nations (RCMUN), Robert College, 9-10th Grades, 4 hrs/wk, 36 wks/yr 2020-2022

Member; Partook in weekly club meetings and actively engaged in club debates, collaborating with peers to represent different countries and debate complex, real-world issues, fostering diplomacy, critical thinking, and problem-solving abilities.

- Participated in extensive research and preparation for various MUN conferences, developing in-depth knowledge of global issues and honing public speaking and negotiation skills.
- Successfully negotiated and passed resolutions, demonstrating diplomacy, persuasive communication, and the ability to build consensus among diverse delegates.
- Attained a comprehensive understanding of international relations, global politics, and the functioning of the United Nations.
- Participated in the following inter-school MUN conferences:
 - RCIMUN’22, Online, 10th Grade, 20 hrs/wk, 1 wk/yr; Expert in Special Conference.
 - MUNDP’22, Online, 10th Grade, 20 hrs/wk, 1 wk/yr; Delegate in UNDDPA committee.
 - RCIMUN’21, Online, 9th Grade, 20 hrs/wk, 1 wk/yr; Delegate in UNFPA committee.
 - SACMUN’21, Online, 9th Grade, 20 hrs/wk, 1 wk/yr; Delegate in Legal Committee.
 - MUNDP’21, Online, 9th Grade, 20 hrs/wk, 1 wk/yr; Delegate to the UNFPA committee.

CONFERENCES & PRESENTATIONS

- Gencer, E., (2023). Advancements in Human-Computer Interaction in the Field of Life Sciences, International Artificial Intelligence and Data Science Symposium, San Francisco, CA, USA and Istanbul, Türkiye.
- Gencer, E., (2023). Human-Computer Interactions, International Artificial Intelligence and Data Science Symposium, San Francisco, CA, USA and Istanbul, Türkiye.
- Gencer, E. (2023, October). Interactive Participant, Project Developer & Presenter on *Artificial Intelligence & Super Computers Seminar 1*, Professor Ruya Samli, Department of Industrial Engineering, Faculty of Engineering, Istanbul University-Cerrahpasa.
- Gencer, E. (2023, October). Interactive Participant, Project Developer & Presenter on *Data Analyses and Machine Learning Applications, Seminar 1*, Associate Professor Ozan Kocadagli, Department of Statistics, Faculty of Letters and Sciences, Mimar Sinan University.
- Gencer, E. (2023, October). Interactive Participant, Project Developer & Presenter on *Machine Learning Applications on Big Data on Energy, Seminar 1*, Associate Professor Yusuf Sait Türkan, Department of Industrial Engineering, Faculty of Engineering, Istanbul University-Cerrahpasa.
- Gencer, E. (2023, October). Interactive Participant, Project Developer & Presenter on *Visual Computing Applications, Seminar 1*, Associate Professor Ersin Namli, Department of Industrial Engineering, Faculty of Engineering, Istanbul University-Cerrahpasa.
- Gencer, E. (2023, June). Interactive Participant, Project Developer & Presenter on *Artificial Intelligence in Computer Imaging Life Sciences Seminar 1*, Professor Levent Altay, Department of Computer Engineering, Faculty of Engineering, Bogazici University.
- Gencer, E., (2022). Human-Centered AI for the Social Innovation, International and Interdisciplinary Conference of Sustainable Development, Technology, and Innovation, London, UK and Istanbul, Türkiye.
- Gencer, E., (2022). Visual Computing for Life Sciences, International and Interdisciplinary Conference of Sustainable Development, Technology, and Innovation, London, UK, and Istanbul, Türkiye.

SPORT ACTIVITIES

Basketball

2016-Present

- Played basketball in Bakırköy Spor Kulübü in the year 2018 and Florya Elit Spor Kulübü in 2019 and 2020.
 - Participated in tournaments including TBF U15 and UniMiniCup.
- Played basketball in the school team during middle school and participated in both district and city tournaments organized by MEB.
 - Became the 2nd in the district Küçükçekmece with Bilfen Halkalı Private School in the 6th grade.
 - Was the captain of the school team in the 7th Grade.
- Played basketball in the high school team; first, in the JV Varsity team during the prep year and in the Varsity team during the following years in Robert College.
 - Participated in scrimmages and official district and city tournaments organized by MEB.
 - Became the Beşiktaş champion in the district high schools tournament in 2022.

Tennis

2014-2019

- Played tennis in Yeşilyurt Spor Kulübü between the years 2014-2019 and participated in several local tournaments organized by the Turkish Tennis Federation.

MUSIC

Piano

2015-2021

- Developed musical knowledge and skills through regular coursework.
- Participated in several end-of-season performances on the stage playing the piano both in Ataköy İspirtothane Kültür Merkezi and Yeşilköy Müzik Atölyesi in Istanbul, 2015-2020.
- Prepared for the London College Music certificates for the piano and received LCM Grade 2, Grade 3, Grade 4, Grade 5, and Grade 6 certificates.
- Received Pianoforte, Recital Grade 6 from the London College of Music; Passed with Distinction.

SKILLS AND INTEREST

Languages: Turkish (Native), English (C1), German (B1)

Hobbies: Engaging with physical activities such as going to the gym and playing basketball, Enhancing my knowledge about the subjects that interest me - specifically computer science, mathematics, and European history - by reading magazine articles and watching documentaries, Programming and doing coding projects, Following worldwide sports - mainly Euroleague, NBA and Wimbledon.

Programming Languages: Python, Java, C, HTML, CSS, JavaScript, SQL

PERSONAL DETAILS

Date of Birth: 8 June 2005

Place of Birth: Istanbul, Turkey

Nationality: Turkish

Gender: Male