



Ramin Yazdani

BIOTECHNOLOGIST · DEVELOPER · DATA SCIENTIST · BIOINFORMATICIAN

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Education

Saarland University

MASTER'S IN BIOINFORMATICS

Saarbrücken, Germany

2024-10-20 - present

University of Tehran

MASTER'S IN BIOTECHNOLOGY (INDUSTRIAL AND ENVIRONMENTAL)

Tehran, Iran

2021-09-22 - 2024-09-15

Islamic Azad University, Roudehen Branch

BACHELOR'S IN BIOTECHNOLOGY

Roudehen, Iran

2017-09-23 - 2021-07-22

Karaj Soltani 1 School

PRE-UNIVERSITY IN NATURAL SCIENCES

Karaj, Iran

2014-09-23 - 2015-09-22

Karaj Soltani 1 School

HIGH SCHOOL IN NATURAL SCIENCES

Karaj, Iran

2011-09-23 - 2014-06-22

Experience

Full-stack Developer

FREELANCE

2018-02-11 - Recent

- Developed and maintained diverse web applications, backend & frontend components, and automated data workflows.

Bioinformatics Researcher - Master's Thesis

UNIVERSITY OF TEHRAN

2023-10-23 - 2024-09-15

- Omics-Based Analysis of Microbial Genomes/Fermentation and Bioprocessing
- Performed bioinformatics analyses, gene expression profiling, functional annotation, and bioprocess optimization.

Co-Founder & Business Development Lead

KAMADANI FOODSTUFF TRADING LLC

2022-07-14 - 2023-07-13

- Company Establishment & Business Development
- Co-founded and established the company, led business development and partnerships.

Research Assistant - Biotechnology Laboratory / Fermentation Engineering

UNIVERSITY OF TEHRAN / RAHPOUYAN FANAVAR SADEGH

2023-01-21 - 2023-09-22

- Fed-batch Optimization & Bioprocess Engineering
- Worked on Pichia pastoris fermentation optimization and bioprocess engineering projects.

Management Board Member

YAZDAN TEJARAT ABSARAN

2009-04-25 - 2023-10-23

- Export, Import, and Business Management
- Oversaw operations, strategic planning, and business development for the family trading business.

Publications

Antibacterial effects of Vancomycin/Ziziphus-encapsulated niosome nanoparticles against vancomycin-resistant Enterococcus faecium clinical isolates

RESEARCH PAPER — WAITING FOR SUBMISSION

n.d.

- Authors:** Rysan Jabr Kadhim Alboughanimeh, et al.

Recent Advances in Conventional and Modern Waste Treatment Approaches [\[LINK\]](#)

BOOK CHAPTER

n.d.

- **Authors:** Ramin Yazdani, et al.
- **Publisher:** Taylor & Francis

Ceftazidime-loaded niosomes as a great antibacterial agent against biofilm-formed *Pseudomonas aeruginosa* clinical isolates

RESEARCH PAPER — WAITING FOR SUBMISSION

n.d.

- **Authors:** Yaqoob Thajil Al-Bozouni, et al.

BCL-2 mediated apoptotic pathway as a promising target for bio-synthesized silver nanoparticles: review article

REVIEW ARTICLE — WAITING FOR SUBMISSION

n.d.

- **Authors:** Pooria Moulavi, et al.

Omics-Based Analysis and Gene Profiling to Identify *Lactobacillus* Strains for Modulating HDL/LDL Ratios in Pharmaceutical Applications

University of Tehran

MASTER THESIS — SUBMITTED

2024

- **Authors:** Ramin Yazdani
- **Degree:** Master's thesis
- **Affiliation:** Faculty of New Sciences and Technologies, School of Life Science Engineering

Languages

Farsi — Native (*Mother tongue*) [Mother Tongue]

English **C1** — Professional (*Fluent*) [IELTS Academic •8.0/9.0 • R 9.0, L 8.5, W 6.5, S 7.0 • 2023-12-28]

German — Beginner (*Studying*)

Workshops & Certifications

Tuf North Academy

2020-9-31 **Microarray Data Analysis in R Software and Systems Biology** [\[LINK\]](#), (18 hours) [Certification](#)

2021-04-10 **Bioinformatics of Proteins, Molecular Dynamic Simulation, and Vaccine Design** [\[LINK\]](#), (58 hours) [Certification](#)

ICAD Academy International

2023-12-08 **GLP** [\[LINK\]](#), (16 hours) [Certification](#)

Rahpouyan Fanavar Sadegh

2023-12-09 **Biosafety, biosecurity, and biological risk** [\[LINK\]](#), (8 hours) [Workshop](#)

2023-12-20 **GMP in drug industry**, (90 hours) [Workshop](#)

2024-02-25 **Fermentation process of heterologous protein production**, (20 weeks) [Workshop](#)

University of Tehran

2023-09-13 **Histological Techniques and Equipment** [\[LINK\]](#), (15 hours) [Certification](#)

2023-09-10 **Fundamental Principles of Molecular Testing Techniques** [\[LINK\]](#), (45 hours) [Certification](#)

2023-09-20 **Fundamental Techniques for Handling, Bleeding, and Injection of Lab Animals** [\[LINK\]](#), (6 hours) [Certification](#)

2023-09-20 **Applied Bioinformatics** [\[LINK\]](#), (10 hours) [Certification](#)

2023-09-15 **Fundamental Principles of In Vitro Cell Culture Techniques** [\[LINK\]](#), (10 hours) [Certification](#)

2023-09-17 **Introduction to Microbiological Lab Techniques** [\[LINK\]](#), (10 hours) [Certification](#)

Actin Academy

2024-06-06 **ChIP-Seq Data Analysis**, (12 hours) [Workshop](#)

2024-03-14 **Online Databases**, (8 hours) [Workshop](#)

2024-04-04 **Genomic Data Analysis**, (24 hours) [Workshop](#)

2024-04-15 **Microarray Data Analysis**, (16 hours) [Workshop](#)

2024-04-22 **Single Cell RNA Sequencing**, (12 hours) [Workshop](#)

2024-04-29 **Bulk RNA Sequencing**, (12 hours) [Workshop](#)

2024-05-06 **Proteomics Data Analysis**, (16 hours) [Workshop](#)

2024-06-27 **Machine Learning**, (20 hours) [Workshop](#)

2024-05-27 **Metagenomic Data Analysis**, (12 hours) [Workshop](#)
 2024-02-19 **Precision Medicine Biological Systems**, (8 hours) [Workshop](#)
 2024-06-10 **Gene Regulatory Network Analysis**, (8 hours) [Workshop](#)
 2024-06-13 **Complex Biological Network Analysis**, (20 hours) [Workshop](#)
 2024-05-20 **Metabolic Network Reconstruction**, (20 hours) [Workshop](#)
 2024-03-04 **Introduction to Big Biological Data**, (8 hours) [Workshop](#)
 2024-07-04 **Docker and Visualization**, (8 hours) [Workshop](#)

Maktab Sharif Academy

2023-01-18 **Python & Django** [\[LINK\]](#), (400 hours) [Certification](#)

Maktabkhooneh

2020-09-18 **Front-End Web Development and Design** [\[LINK\]](#), (70 hours) [Certification](#)
 2020-07-23 **Python Programming for Beginners** [\[LINK\]](#), (57 hours) [Certification](#)
 2021-12-11 **Advanced Python Programming** [\[LINK\]](#), (57 hours) [Certification](#)

Daneshjooyar

2021-11-09 **UI/UX**, (30 hours) [Workshop](#)

Hamrah Academy

2023-07-15 **Fundamentals and Roadmap of Data Science** [\[LINK\]](#), (3 hours) [Certification](#)
 2023-09-01 **Mathematics for Data Science and Artificial Intelligence** [\[LINK\]](#), (8 hours) [Certification](#)
 2023-09-05 **Data Mining and Business Intelligence with KNIME** [\[LINK\]](#), (6 hours) [Certification](#)
 2023-09-12 **Comprehensive Python Programming** [\[LINK\]](#), (12 hours) [Certification](#)
 2023-10-22 **Data Visualization Tools** [\[LINK\]](#), (5 hours) [Certification](#)
 2023-10-19 **Introductory Database Principles** [\[LINK\]](#), (10 hours) [Certification](#)
 2023-11-01 **Data Mining with Python** [\[LINK\]](#), (8 hours) [Certification](#)

Faradars

2024-03-18 **Linear Algebra Toward Data Science**, (60 hours) [Workshop](#)

Skills

PROGRAMMING & SCRIPTING

Programming Languages

Python,R,C++,JS

Machine Learning & Data Science

Supervised/Unsupervised,Model Metrics,Cross-Validation,Hyperparameter Tuning,Feature Engineering,TensorFlow,PyTorch,Transformers,ML Pipelines,Dim. Reduction,Deep Learning, Regularization,Explainability

Scripting & Automation Tools

Bash,Selenium,Web Automation & Crawling,Shell,Conda,venv

DEVOPS & INFRASTRUCTURE

Networking & Protocols

Protocols,OSI/TCP-IP,IP/Subnetting,Routing/Switching,VPN/Tunneling,Firewall & ACL,Proxies & LB,DNS/DHCP,Sockets,Diagnostics,Traffic Analysis,Performance Tuning,IoT & Embedded

DevOps Tools & CI/CD Pipelines

Pipeline Design,Git,n8n,CI/CD

Cloud Platforms & Authentication

Firebase Auth,Azure

Containerization & Orchestration

Docker,K8s

System Administration & Linux Tools

Linux CLI

SOFTWARE & WEB DEVELOPMENT

Frontend Frameworks & UI Technologies

HTML,CSS,React,Tailwind,Bootstrap

Backend Development & APIs

Node.js,Express,Flask,Django,FastAPI,REST APIs

DATABASES & DATA ENGINEERING

Database Modeling & Optimization

DB Concepts,ORM,ERD Modeling,Indexing & Queries,ACID,Schema Design,Backup & Recovery

SQL Databases

PostgreSQL,MySQL,SQLite

NoSQL Databases

MongoDB,Redis

Data Pipelines & ETL Systems

Knime

DATA VISUALIZATION & REPORTING

Scientific Plotting Tools

Matplotlib,Seaborn,Plotly,ggplot2,Jupyter,RMarkdown,LaTeX

Dashboarding & Reporting Platforms

Power BI,Tableau,Dashboards

Visual Analytics & Network Tools

NetworkX,Graphviz

BIOINFORMATICS DOMAINS

Statistical Modeling & Machine Learning in Bioinformatics

scikit-learn,GSEA,FDR,Elastic Net,LASSO,XGBoost,CCA,WGCNA,Regularization,Fine-Tuning,Model Eval

Genomics & Genome Assembly

FASTQC,Bowtie2,BWA,HISAT2,Kallisto,BUSCO,Quast,Library Prep

Transcriptomics & Single-Cell Analysis

DESeq2,edgeR,limma,DoubletFinder,ArchR,10x Visium,Seurat,Cell Ranger,CytoSPACE,Hist2ST

Metagenomics & Microbial Ecology

eggNOG,MetaPhlAn,QIIME2,Kraken2

Functional Annotation & Systems Biology

GO,Enrichr,BioCyc,Cytoscape,KeGG

Protein Structure & Structural Bioinformatics

AlphaFold,Modeller,SwissModel,HHpred,HMMs,TmHMM,Rosetta

Phylogeny & Comparative Genomics

BLAST,Clustal,OrthoFinder

LABORATORY TECHNIQUES

Molecular & Microbial Biology Techniques	DNA/RNA Extraction,PCR/qPCR,Gel Electrophoresis,Electroporation,Gram Staining,Media Prep, Contamination Control,AST,Biochemical ID,Broth Culture,Aseptic Technique,Cell Counting,Cell Authentication,Cryopreservation,Cell Culture,Western Blot,Chem Handling,Pipetting
In Vivo & Ex Vivo Experimental Protocols	Animal Handling,Anesthesia,Gavage,Blood Draw,Enrichment,Euthanasia,Ethics
Experimental Design & Laboratory Documentation	DoE,SOP Compliance,RSM
Analytical Instruments & Chromatography	2D-PAGE,ELISA,FACS,Confocal Scope,Fluoro Scope,AAS,CE,Cond. Meter,HPLC,Chromatography, UV-Vis/FTIR
Bioprocess & Bioreactor Engineering	Reactor Modes,Airlift BioR,Agitation/Foam,Feed Control,HCDC,MFA,DFBA,Wet Wt,Centrifug./Filt., Metabolic Eng.,Scale-Up,Monitoring Tools,Bio/pH-stat
Lab Safety, Compliance & Regulatory Practices	GLP,GMP,Biosafety,QA/QC,R&D Rules

SOFT SKILLS

Core Soft Skills	Analytical Thinking,Problem-Solving,Team Collaboration,Project Management,Scientific Writing, Adaptability & Learning,Time Management,Interdisciplinary Communication,Research & Analysis,Self-Motivation
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Projects

Integrated Omics Pipeline for Microbial Genomics

BIOINFORMATICS

- Developed a comprehensive pipeline integrating metagenomic, transcriptomic, and proteomic data for functional gene analysis and microbial community profiling.

Policy Compliance Checker (Flask + React + SQLite)

PROGRAMMING

- Built a FReMP stack web application to upload dynamic security policies and user datasets (JSON/CSV), evaluate per-user compliance server-side, and present filterable/exportable pass/fail results with explanations in a React UI. [\[LINK\]](#)

Cosmetic Shop Marketplace Template (Django)

PROGRAMMING

- Built a multi-app Django 4.1 marketplace template for a cosmetics shop with a reusable Core layer (centralized field factories, base models with soft-delete, shared mixins, and a custom app scaffolding command), plus product catalog listing/search/filtering, cart & checkout flow, and order/payment/shipment models rendered with Bootstrap templates on SQLite. [\[LINK\]](#)

Cosmetic Shop Marketplace Template (Django)

PROGRAMMING

- Built a multi-app Django 4.1 marketplace template for a cosmetics shop with a reusable Core layer (centralized field factories, base models with soft-delete, shared mixins, and a custom app scaffolding command), plus product catalog listing/search/filtering, cart & checkout flow, and order/payment/shipment models rendered with Bootstrap templates on SQLite. [\[LINK\]](#)

Maktab 78 File Store (Framework-less Python + PostgreSQL)

PROGRAMMING | STUDENT PROJECTS

- Developed an educational, framework-less Python project featuring a nested CLI router/menu system with dynamic callbacks, a lightweight PostgreSQL persistence layer (psycpg2) with small ORM-like models and query builders for CRUD, and domain modules for users, files, comments, carts, and order items. [\[LINK\]](#)

Python Bootcamp Portfolio — Maktab 78 Assignments & Projects

PROGRAMMING | STUDENT PROJECTS

- Compiled and documented a monorepo of Python Bootcamp coursework and projects, organized by homework modules (fundamentals, OOP, system scripting, data validation, databases with PostgreSQL/MongoDB, and Flask REST APIs), including multiple major subprojects in a single structured repository. [\[LINK\]](#)

IranDoc Ganj Research Paper & Thesis Scraper (Selenium + BeautifulSoup)

PROGRAMMING

- Developed a Python web-scraping tool using Selenium and BeautifulSoup to crawl ganj.irandoc.ac.ir year-by-year (and page-by-page when needed), extract thesis/paper metadata (e.g., subject, type, course, year, university, contributors) with UTF-8 Persian support, and export the results to CSV with an additional CSV cleaning utility. [\[LINK\]](#)

Personal CV Website (Django + React)

PROGRAMMING

- Built a personal CV website with a React single-page frontend and a Django backend for data storage and API services, showcasing skills, projects, and professional experience in a web format. [\[LINK\]](#)

Movie/TV Discovery & Personalization App (React + Express + MySQL)

PROGRAMMING

- Built a full-stack movie/TV discovery and personalization monorepo with a React client (Redux Toolkit, Material UI) and an Express server backed by MySQL, integrating Firebase Auth and OMDb/TMDb metadata APIs to support per-user favorites, ratings, reviews, and recommendation requests via a REST API. [\[LINK\]](#)

Hospital Database Management System (MySQL + SQL)

PROGRAMMING | STUDENT PROJECTS

- Developed a MySQL hospital database schema for managing patients, doctors, services, departments, surgeries, and visits, providing SQL scripts to create tables, insert sample records, and generate multiple report views, alongside an ERD for documentation. [\[LINK\]](#)

Terminal Calculator (TUI) — Python

PROGRAMMING | STUDENT PROJECTS

- Developed a Python 3.10 terminal calculator (TUI) with safe expression evaluation, command history (view/replay), and light/dark theming using Rich + prompt_toolkit, packaged as a CLI with pytest tests and GitHub Pages documentation. [\[LINK\]](#)

CV Generator — JSON → Awesome-CV PDF (Jinja2 + XeLaTeX)

PROGRAMMING

- Developed a Python-based CV generator that renders structured JSON into modular Jinja2+LaTeX section templates using the Awesome-CV class, then compiles polished PDFs via XeLaTeX with multi-CV batch support, optional profile photos, StrictUndefined validation, LaTeX-escaping helpers, and reliable intermediate-file cleanup. [\[LINK\]](#)

Python Projects Roadmap (Ongoing)

PROGRAMMING | STUDENT PROJECTS

- Maintaining an ongoing curated roadmap of ~100 Python project ideas categorized by difficulty (Beginner/Intermediate/Advanced) to guide consistent practice and portfolio-building, alongside repository utilities (e.g., create_projects.py). [\[LINK\]](#)

Single-Cell & Spatial Transcriptomics Workflow

BIOINFORMATICS

- Implemented analysis workflows for single-cell RNA-seq and spatial transcriptomics data, enabling cell type identification and trajectory inference.

Bioprocess Optimization for Protein Production

BIOTECHNOLOGY

- Optimized fed-batch fermentation processes for heterologous protein expression in Pichia pastoris, including pathway engineering and bioreactor management.

Automation & Web Data Extraction Solutions

PROGRAMMING

- Designed and deployed Python-based web crawlers and automation scripts for data extraction, cleaning, and processing from diverse online sources.

Full-Stack Web Application for Data Visualization

PROGRAMMING

- Built interactive dashboards and visualization tools using Django, React, and Plotly for scientific data representation and reporting.

Machine Learning Applications in Bioinformatics

PROGRAMMING | BIOINFORMATICS

- Developed predictive models and clustering algorithms for biological data analysis, focusing on gene expression and classification tasks.

Containerized Bioinformatics Workflows

BIOINFORMATICS

- Deployed reproducible bioinformatics pipelines using Docker and Kubernetes for scalable and collaborative research environments.

CI/CD Pipeline Implementation for Web Applications

PROGRAMMING

- Configured and automated continuous integration and deployment pipelines using GitLab CI/CD and Docker for web applications, ensuring robust delivery workflows.

Backend API Development for Data-Driven Applications

PROGRAMMING

- Designed RESTful APIs with Django Rest Framework and FastAPI to serve as backends for data-driven applications, focusing on performance and scalability.

Real-Time Data Visualization Dashboard

PROGRAMMING | BIOINFORMATICS | BIOTECHNOLOGY

- Developed a real-time dashboard for monitoring and visualizing streaming data using React, WebSockets, and Plotly for interactive user experience.

Full-Stack E-commerce Web Platform

PROGRAMMING

- Built a scalable e-commerce platform integrating user management, product catalogs, and payment systems using Django, React, and PostgreSQL.

Linux System Automation & Monitoring Scripts

PROGRAMMING | BIOINFORMATICS

- Created Bash and Python scripts for automating server maintenance tasks, log management, and resource monitoring on Linux-based systems.

Cloud-Based Microservices Deployment

PROGRAMMING

- Implemented microservices architecture and deployed containerized services on cloud infrastructure using Docker and Kubernetes.

Robotics & Embedded Systems Developer — High School & Personal Projects (2011–2015)

ROBOTICS | EMBEDDED SYSTEMS | STUDENT PROJECTS

- Microcontroller programming and robot development for student competitions; designed and built embedded robotics systems and control logic.

References

Wissenschaftliche Mitarbeiterin / Researcher — Department of Developmental Neuropsychology

University of Trier, Trier, Germany

SHOKOUH SHOMEIL ZADEH SHOUSHTARI

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Assistant Professor, Biochemist, Member of AAUP — Department of Biotechnology

Islamic Azad University, Roudehen Branch, Roudehen, Iran

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Bioprocess Engineering, R&D Specialist at RFS

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