

ARTUR RODRIGUES

artur.melo.rodrigues@gmail.com | linkedin.com/in/artur-melo-rodrigues | github.com/rutracer

Passionate professional with experience in Full-Stack, Cybersecurity, and AI/Machine Learning.

EXPERIENCE

Software Engineer

NTConsult

September 2025 – June 2026

San Diego, CA

- Designed and implemented full-stack web application for internal company use via a React, Tailwind, shadcn/ui, MongoDB, and NestJS stack.
- Developed the agent loop and context-engineering layer of a Human-AI collaborative code-generation platform, piloted internally and later sold as a client product.
- Acted as a Forward Deployed Engineer (FDE) for a key client, translating daily feedback into scoped work and either implementing solutions myself or coordinating with the relevant engineers.
- Evaluated security tooling and delivered comparison reports guiding leadership adoption decisions.

Undergraduate Researcher

UCSD Computing for Social Good

June 2022 – Sept. 2022

San Diego, CA

- Halved** batch processing time of **2 million** Reddit posts using PSAW and PRAW APIs in Python.
- Used Logistic Regression, SVM, and LSTM **machine learning models** to predict burnout and depression from social media posts with an **87%** accuracy.
- Applied **NLP techniques** (Tokenization, Stemming/Lemmatization, POS Tagging, Stop Word Removal) to enhance the quality of machine learning model training by **40%**.

EDUCATION

University of California San Diego

B.S. in Mathematics and Computer Science

Sept. 2021 – June 2025

San Diego, CA

- Coursework: Data Structures, Algorithms, Object Oriented Programming, Computer Architecture, Machine Learning, Cryptography, Calculus, Linear Algebra, Discrete Math, Graph Theory, Probability, Statistics, Numerical Analysis, Optimization, Abstract Algebra

PROJECTS

AirBnB Listing Success Predictor | TensorFlow, plotly, EDA, Data Visualization

- Implemented supervised learning algorithms (CNN, RNN, Regression) using scikit-learn and TensorFlow to identify 10 key success factors in AirBnB listings and predict review scores.
- Implemented data pipeline for hyperparameter tuning and feature engineering using pandas and numpy to improve model accuracy to **120%**.

Pentesting AD Home Lab | Active Directory, Kali Linux, VMWare, Penetration Testing

- Used Responder and mitm6 to perform LLMNR Poisoning, SMB Relay, and Kerberoasting to gain a foothold.
- Used Ipadomaindump and BloodHound to enumerate domain leading to lateral and vertical movement
- Utilized Pass the Password/Hash, Token Impersonation, and Mimikatz to compromise the domain.

CERTIFICATES/CERTIFICATIONS

Meta: Front-End Developer Professional Certificate, Back-End Developer Professional Certificate

TCM Security: Practical Network Penetration Tester, Practical Junior Penetration Tester, Practical Ethical Hacking, Windows Privilege Escalation, Linux Privileged Escalation, Open Source Intelligence (OSINT) Fundamentals, External Pentest Playbook

MetaCTF: Placed **69th** out of 278 participating teams as a solo in First Annual TCMSecurity x MetaCTF CTF

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C, C++, MySQL, SQL Server, SQLite, HTML/CSS, R, LaTeX

Frameworks: React, Node.js, NestJS, shadcn/ui, TailwindCSS, Flask, Django, JUnit, Jest, Swagger

Developer Tools: Linux, Git, Docker, AWS, Azure, VMWare, n8n

Libraries: TensorFlow, scikit-learn, pandas, NumPy, Matplotlib, Seaborn, plotly

Hobbies: Basketball, Volleyball, Surfing, Martial Arts, Music, Video Games, Video Editing