

Omar Elamri

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PROFESSIONAL SUMMARY

Versatile, young software developer offering 5 years of experience specializing in agile software development methodologies, advanced machine learning algorithms, and proficient project management techniques.

EDUCATION

University of California, Los Angeles (UCLA) *Expected June 2026*
M.S. Computer Science

University of California, Los Angeles (UCLA) *Expected June 2024*
B.S. Computer Science, *Technical Breadth in Mathematics, Electrical Engineering* **GPA 3.91**
Coursework: Compilers, Operating Systems, Algorithms, Networking, Machine Learning, Computer Architecture, Data Structures

WORK EXPERIENCE

The World Bank *Los Angeles, CA*
Research Assistant *July 2023 - Present*

- Applied advanced AI/ML technologies (BART, SVM, TF-IDF, RNNs) to automate research analysis, improving data processing efficiency.
- Optimized algorithms to enhance information extraction, providing actionable insights for policy decisions.
- Displayed leadership skills as the PM of a 4-member team, communicating with Dr. Graeme Blair and the UCLA research team.

Horwitz, LLC *New Hope, MN*
Software Engineer, Contractor *January 2019 - Present*

- Led the development of a full-stack virtual inventory using Node.js and React, in use by 50 warehouse and on-site engineers.
- Managed the deployment of the system on Azure platform, leveraging an Nginx reverse proxy and a PM2 load balancer.
- Maintained system functionality and security over 4 years, consistently incorporating feature requests and updating dependencies.

Walleye Capital *Plymouth, MN*
Part-Time Software Engineer *June 2022 - May 2023*

- Contributed to Walleye's Deephaven DB system by designing and developing 5 interactive widgets using Java Swing.
- Proposed and implemented the modernization of Walleye's Trading Desk's tools, leading to a 10% increase in trader satisfaction.
- Created a command-line app that seamlessly integrated Microsoft Teams with RingCentral, simplifying communication for employees.

TECHNICAL SKILLS

Software Engineering: Scrum, Agile; **Languages:** Swift, Python, OCaml, C, C++, Java, JavaScript; **Frontend:** React, Angular, Ionic, Expo, SwiftUI, **Backend:** Node.js, MongoDB, PM2, Nginx, Certbot; **Infrastructure:** Azure, Google Cloud, Docker, Kubernetes, Hadoop, Linux
Machine Learning/Data Science: Jupyter, NumPy, Pandas, SciKit-Learn, PyTorch, TensorFlow, Keras

PROJECTS

Violet *February 2024 - Present*

- Co-founder of Violet, an application that seeks to streamline the hiring process for job-seekers and small businesses.
- Accepted into Startup Labs, a UCLA incubator associated with Blackstone.

Digitr *January 2017 - Present*

- Created an innovative educational application at the age of 12 that keeps a record of students' activities outside the classroom.
- Employed effective marketing strategies, resulting in adoption by over 20 schools.
- Presented the project at 5 trade shows and formal events, leading to a 23% increase in customer acquisition.

Formal Verification of Compiled Binaries *January 2024 - March 2024*

- Spearheaded a project utilizing the angr platform for formal verification on over 50 compiled binaries.
- Utilized symbolic execution and z3 SMT solver, resulting in the detection of vulnerabilities and proof of program correctness.

Training Rabbits with Reinforcement Learning *February 2024 - March 2024*

- Applied Reinforcement Learning policies such as DQN and PPO to train an agent to play complex decision games.
- Utilized the OpenAI Gym, PyTorch, and Tensorboard to train the agent for over 1 million iterations, achieving a win rate of 88%.

MISCELLANEOUS

Languages: Proficient in Arabic and French
Activities: Psi Beta Rho (division of ACM Cyber), *Member*; Upsilon Pi Epsilon (CS Honors), *Member*