

John R. Molina

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Software Engineer

Software Engineer combining a strong Computer Science foundation with 7+ years of data management experience. Highly proficient in Python, SQL, and React, with hands-on experience deploying cloud-native applications and accelerating development using AI tooling (OpenAI, Gemini, DeepSeek). Proven ability to bridge complex backend systems with responsive frontends to deliver scalable, high-quality code.

Technical Skills

- **Languages:** Python, Java, JavaScript (ES6+), SQL, C/C++, TypeScript, PHP, Ruby, HTML/CSS
- **Frameworks & Backend:** Django, React, Node.js, Next.js, RESTful APIs, Microservices
- **Databases:** PostgreSQL, Oracle, MySQL, SQL Server, SQLite3, Vector Databases
- **DevOps, Cloud & AI:** AWS (EC2), DigitalOcean, Docker, CI/CD (GitHub Actions, GitLab), Git, Linux, AI-Assisted Dev (OpenAI, Gemini CLI, OpenCode, Pi)

Professional Experience

Independent Technical Consultant | Full-Stack Developer & Digital Strategist | New York, NY | 2019 – Present

- Retained to architect and engineer the migration of a legacy platform to a modern cloud-native stack (Python/Django, React, PostgreSQL) on AWS, resolving critical scalability bottlenecks.
- Advised leadership on data-driven engagement strategies, implementing analytics pipelines and workflows that drove a 300% increase in subscribers and sustained a 55% email open rate.
- Acting as the primary technical stakeholder for the organization's digital presence (7,400+ annual visitors), ensuring 99.9% uptime and optimizing site performance to achieve an industry-leading 4+ minute average session duration.
- Leveraged local and cloud-based AI tools (Gemini CLI, OpenAI, DeepSeek, OpenCode) to accelerate code generation, optimize complex database queries, and streamline debugging processes.

Columbia University | Development Assistant, Data Management Group | New York, NY | 2017 – 2022

- Engineered and maintained ETL pipelines using Python, advanced SQL to process and validate over 5 million constituent records, ensuring high data integrity for strategic university planning.
- Developed interactive dashboards using SSRS and Power BI, translating complex biographic, employment, and demographic data into actionable insights for non-technical university fundraising leadership.
- Bridged technical and non-technical teams by prototyping solutions in Excel before building automated SQL scripts, saving an estimated 10+ hours of manual work weekly.

Technical Projects

Client/Server Chat System | *C/Java, Linux Sockets/TCP/IP*

- Engineered a robust, multithreaded chat application, demonstrating deep knowledge of networking (TCP/IP), persistent connections, and secure data transmission in Unix environments.
- Implemented complex data structures for message parsing and connection handling, performing rigorous unit testing (JUnit) to ensure reliability.

Full-Stack Portfolio Platform | *Python, Django, React, PostgreSQL, AWS, DigitalOcean, Cloudflare*

- Architected a secure, full-stack web application. Prototyped the initial server architecture on an AWS EC2 instance before migrating production deployment to a DigitalOcean Droplet for optimized hosting.
- Designed a relational database schema (PostgreSQL) and implemented secure RESTful APIs to manage dynamic content, utilizing modern JavaScript (ES6+) and React for the frontend.
- Configured a full CI/CD pipeline via GitHub Actions to automate testing and deployment, ensuring high code quality.

Education

- **Bachelor of Science in Computer Science** | Montclair State University | Montclair, NJ