

# Ahmed Nasser

Senior Software Engineer

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🐙 <https://github.com/bartawilly>

## Education

B.Sc. in Computer Science, Cairo University, Faculty of Computers and Information – GPA: 3.22/4.0

## Skills & Expertise

- **Programming Languages:** C/C++, PHP, Python, TypeScript, and Node.js.
- **Data Storage:** SQL databases (MySQL, PostgreSQL); NoSQL databases (Amazon DynamoDB, MongoDB).
- **Software Engineering:** Data Structures, Algorithms, Design Patterns, SOLID Principles.
- **Software Architecture:** Monolithic and Microservices architectures.
- **Server Administration:** Linux/Windows, Security, Performance Optimization, Networking, Bash & Shell Scripting.
- **Cloud Computing Platforms:** Amazon Web Services (AWS) (e.g., S3, VPC, LB, CloudFront, Cognito, RDS, Lambda).
- **Distributed Systems:** State Machine Replication (SMR), Consensus Algorithms (Paxos, Raft), and Elasticsearch, Logstash, Kibana (ELK) Stack.
- **AI & ML:** LLM, GPT-4, Lang Chain (Lang Smith), Fine-tuning.
- **SDLC methodologies & practices:** Agile, Waterfall, TDD.
- **Containerized Applications:** Docker, Docker Compose, AWS ECS, AWS EKS, Kubernetes (K8s).
- **IaC:** AWS CloudFormation, Terraform.
- **CI/CD:** GitHub Actions, GitLab CI/CD.

## Projects

### Park Exchange

Real-time and cost-effective solution that matches individuals seeking for a car parking spot with the current owners.

- Designed and developed a custom solution using Open Source Routing Machine (OSRM) which was deployed using AWS ECS/ECR and CloudFormation to align with the projects' budget and stop relying on costly Google Maps Platform services such as Geolocation, Distance Matrix, and Directions.
- Implemented a real-time location tracking and messaging service using AWS Lambda integrated with Amazon API Gateway's Web Socket.
- Implemented a voice communication feature using Amazon Kinesis Video Streams with WebRTC (Signaling Channel).
- Designed pricing model based on each zone base price, demand & supply, and surge timings.
- Developed matching algorithm considering buffer zone, arrival time with waiting time, and vehicle size category.
- Used AI/ML techniques like object detection and segmentation to allow users to use mobile cameras to identify front and rear available parking spaces.

### WebGen Studio

Web-based design engine for building pixel perfect, highly functional websites using its ready-to-use modules.

- Designed many core modules integrated with AWS services (e.g., Amazon Polly, Amazon Lex).
- Implemented a serverless service where users can convert a PSD file to responsive single-page website.
- Introduced the dynamic exporting where a website can be exported as monolithic application.
- Containerized and applied microservices architecture to core WebGen components enhancing scalability, availability and streamline deployment processes.

## Work Experience

Senior Software Engineer | WebGen Studio

Remote | Sydney, NSW, Australia | Sep 2019 – Current

- Increased the team productivity by almost 20% by mentoring six junior developers, reviewing PRs, providing detailed feedback to ensure high code quality.
- Collaborate with Project Management, Marketing, UI/UX, and QA teams for seamless integrated software development process to meet business objectives and timelines.
- Adopt agile methodologies, facilitating daily stand-ups and sprint planning.
- Lead the system design and implementation for many core functionalities and integrations.
- Modernize legacy components to improve system performance.
- Automate various tasks and workflows and managing infrastructure with code.
- Manage budgets of various projects, resulting in a reduction of AWS billing by almost 35% by optimizing AWS resources usage and allocation.
- Participate in company's tech research, applying modern technologies like serverless architectures and AI-driven solutions.
- Organize monthly contest for the team members, which have a great impact on the team development.

Backend Engineer | Sportwetten Tipps

Remote | El Gouna, Red Sea, Egypt | Nov 2017 – Sep 2019

- Contributed in backend development of a solution which provides customers with the betting tips, strategies, predictions ...etc.
- Developed a real-time betting info service using API integrations with bookmakers.
- Implemented a custom admin dashboard for content management.

## Licenses & certifications

- Coding for Everyone: C and C++ by University of California, Santa Cruz on Coursera.
- Meta Back-End Developer by Meta on Coursera.