

Tomas Lopez

Senior Full-Stack AI Chatbot & Web Application Architect

SUMMARY

- 14+ years architecting and deploying scalable AI chatbots and multi-tenant web platforms, automating 80%+ client support inquiries and supporting 10M+ monthly users.
- Expertise in Python, PHP, JavaScript/TypeScript, with advanced use of frameworks like Django, FastAPI, Laravel, React.js, and React Native for full-stack development.
- Proficient in AI tools including Rasa, Dialogflow, LangChain, OpenAI APIs, and vector databases, delivering HIPAA-compliant healthcare and fintech solutions.

TECHNICAL SKILLS

Main Technical Skills	Python (14 yr.), TypeScript (14 yr.), PHP (12 yr.), React (10 yr.), React Native (9 yr.)
Programming Languages	PHP (12 yr.), Python (14 yr.), TypeScript (14 yr.)
JavaScript Frameworks	React (10 yr.)
JavaScript Libraries and Tools	React Native (9 yr.)

WORK EXPERIENCE

Senior AI Engineer & Full-Stack Architect - Vanguard Digital Solutions (80+ Client Projects across Healthcare, Fintech, E-commerce, and Logistics)

Duration: Jun 2014 – Present

Summary:

- Led AI and full-stack development for a diverse portfolio of over 80 client projects spanning healthcare, fintech, e-commerce, and logistics sectors
- Delivered AI-powered chatbots, multi-tenant web platforms, and mobile applications designed to automate client support and enhance user engagement at scale

Responsibilities:

- Developed 45+ AI-powered chatbots and virtual assistants using Python (Django, FastAPI), Node.js, and NLP frameworks including Rasa, Dialogflow, LangChain, and OpenAI APIs.
- Built 30+ full-stack web applications with React.js frontends and PHP/Laravel or Python/Django backends, integrating GraphQL and REST APIs.
- Created 20+ mobile apps using React Native with backend integrations via Supabase, Node.js, and Django.



- Architected 35+ backend systems managing over 40 databases (MySQL, PostgreSQL, MongoDB, MariaDB) handling 10M+ daily API requests.
- Implemented AWS cloud infrastructure including EC2, RDS, Lambda, S3, SageMaker, and Bedrock for over 50 products.

Technologies: Python (Django, FastAPI), Node.js, PHP (Laravel), React.js, React Native, Rasa, Dialogflow, LangChain, OpenAI APIs, GraphQL, REST APIs, Supabase, MySQL, PostgreSQL, MongoDB, MariaDB, AWS (EC2, RDS, Lambda, S3, SageMaker, Bedrock)

Senior AI Engineer & Backend Lead - Intellispeak AI (Conversational AI Platform for Enterprise Clients)

Duration: 2012 – 2014

Summary:

- Led AI engineering for a conversational AI platform serving over 500 enterprise clients
- Designed and built the core chatbot engine to process millions of daily conversations, enhancing enterprise customer engagement through advanced dialogue systems

Responsibilities:

- Managed a team of 8 engineers focused on developing and maintaining the conversational AI platform.
- Designed and implemented the core chatbot engine using Python (Django) and Rasa.
- Ensured platform scalability and reliability to handle 5M+ daily conversations.

Technologies: Python (Django), Rasa

Full-Stack Developer & AI Researcher - DataFlow Labs (Full-Stack Web Applications and Custom Chatbots Development)

Duration: 2010 – 2012

Summary:

- Developed full-stack web applications and custom chatbots while conducting research on deep learning models for natural language processing
- Contributed to advancing AI capabilities through peer-reviewed publications

Responsibilities:

- Developed web applications using PHP/Laravel, Python/Django, and Node.js.
- Built custom chatbots tailored to client needs.
- Conducted AI research focused on deep learning models for NLP.

Technologies: PHP (Laravel), Python (Django), Node.js

Junior Full-Stack Developer - TechBridge Solutions (Client Web Applications Development)

Duration: 2008 – 2010

Summary: Developed client web applications with custom interactive features and plugins, enhancing user experience and functionality for various business clients.

Responsibilities:

- Developed web applications using PHP, JavaScript, and MySQL.
- Built custom interactive features and plugins to meet client requirements.



Technologies: PHP, JavaScript, MySQL

EDUCATION

- **Bachelor of Engineering (Computer Engineering)**
Kettering University (Flint, MI), GPA: 3.6, First Class Honors, Co-op at GM & Delphi Automotive
2004 - 2008
- **Postgraduate Coursework (Non-degree, 30 Credit Hours)**
University of Texas at San Antonio, Focus: Machine Learning, NLP, and Advanced Database Systems
2008 - 2010

CERTIFICATION

- **AWS Certified Solutions Architect (Professional)**
2023
- **AWS Certified Machine Learning (Specialty)**
2022
- **Django Certified Developer**
2022
- **MongoDB Certified Developer**
2021
- **FastAPI Certified Developer**
2023
- **Meta Certified Full-Stack Developer**
2023

