

Oskar Wojciech Glowacki

Senior Full Stack Engineer | Casino Game Developer | Cloud DevOps | AI/ML Engineer

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Skills

- HTML5 Slot Games | Pixi.js | Real-Money Gaming (RMG) | RNG Integration | GLI-19 Compliance | Game Math & RTP Configuration | Wallet API Integration | Idempotent Transactions | Game Aggregation Layer | SoftSwiss-style Integrations | Spine 2D Animation | TexturePacker | WebSocket Real-Time Gaming | LiveOps & Game Analytics | Responsible Gaming Features | iGaming Architecture | Certified Game Server | Audit Logging | Operator Back-Office Portal
- React | Next.js | Vue.js | Nuxt.js | Angular | AngularJS | TypeScript | JavaScript | ES6 | Svelte | SvelteKit | Gatsby.js | Storybook | React Native | Swift | Ionic | Tailwind CSS | Bootstrap | Ant Design | Material UI | PrimeReact | SASS | SCSS | Less | CSS | HTML5 | Framer Motion | GSAP | Context API | Redux | React Query | React Router | Chart.js | D3.js | Mapbox GL JS | Webpack | Vite | Responsive Design | WCAG 2.0 | SEO | Vanilla JavaScript | jQuery
- Python | TypeScript | JavaScript | Java | C# | C++ | C | PHP | Golang | Go | Ruby | Rust | Scala | SQL | Perl | FORTRAN | PySpark
- FastAPI | Django | Django REST Framework | Flask | Node.js | Express | NestJS | Spring Boot | ASP.NET Core Web API | Laravel | Ruby on Rails | GraphQL | Apollo GraphQL | REST APIs | Microservices Architecture | WebSocket | WebRTC | OpenAPI | Swagger | Pydantic | SQLAlchemy | TypeORM | Sequelize ORM | Prisma | JWT | OAuth2 | tRPC | J2EE | Servlets | SOAP | XML | MVC | MVVM | Nginx | RabbitMQ | MQTT
- Pandas | scikit-learn | TensorFlow | PyTorch | JAX | Kubeflow | MLOps | AIOps | LLMs | OpenAI GPT-4 | Claude 3 | LangChain | LangGraph | RAG (Retrieval Augmented Generation) | Multi-Agent Systems | Prompt Engineering | Vector Databases | Pinecone | Weaviate | Chroma | Hugging Face | Embeddings | Semantic Search | Feature Engineering | MLlib | GitHub Copilot | AI Code Generation
- PostgreSQL | PostGIS | MySQL | MariaDB | SQLite | SQL Server | Oracle PL/SQL | MongoDB | NoSQL | CouchDB | DynamoDB | Redis | Firebase | Snowflake | Delta Lake | ClickHouse | Row-level Security | Database Schema Design | Query Optimization
- AWS | EC2 | S3 | RDS | Lambda | Fargate | ECS | EKS | EMR | Kinesis | SageMaker | API Gateway | CloudWatch | CloudFront | CloudFormation | CDK | Elastic Beanstalk | AppSync | Cognito | OpenSearch | Elasticsearch | Glue | Redshift | Athena | QuickSight | Pinpoint | SES | SQS | SNS | IAM | DMS | Amplify | ElastiCache | Azure | Azure CLI | Azure Monitor | Azure Data Factory | Azure Databricks | Azure Synapse | Dynatrace | GCP | BigQuery | Compute Engine | Cloud Storage | Cloud SQL | AI Platform | Docker | Kubernetes | Terraform | Ansible | Argo CD | Istio | Chef | Salt | Cloudflare | Vercel | GitHub Actions | GitLab CI | Jenkins | CircleCI | Travis CI | CI/CD | Infrastructure as Code (IaC) | boto3
- Pimcore | Shopify | WordPress | AEM | Laravel Nova | Stripe Payment Integration
- Apache Airflow | Apache Kafka | Apache Spark | PySpark | AWS Glue | AWS Data Pipeline | ETL/ELT | Data Pipelines | Distributed Processing | Tableau | Google Analytics | Google Tag Manager | Snowflake Zero-Copy Cloning
- Apache Kafka | RabbitMQ | Tibco JMS | AMQ | ActiveMQ | Amazon SNS | Amazon Kinesis | MQTT | HL7 | FHIR | Mirth Connect | NCPDP
- Jest | Mocha | Chai | Cypress | Playwright | Puppeteer | Enzyme | Jasmine | WebDriver | Selenium | pytest | unittest | Test-Driven Development | Integration Testing | E2E Testing | Clean Code | ESLint | Prettier | Test Coverage (85%+ target) | CI/CD Test Automation
- Git | GitHub | GitLab | Bitbucket | NPM | Yarn | PNPM | Monorepo | Docker Compose | Tomcat | JBOSS | Algolia | Typesense | Datadog | Prometheus | Grafana | ReTool | Figma | Sketch | Adobe XD | Confluence | Jira | Microsoft Office | APM | JSON | YAML | Scrum | Agile | SAgile | SDLC
- Linux | Unix | Windows | AIX | Bash Scripting | Shell Scripting | TCP/IP | DNS Configuration | SSH | NIST Standards | FedRAMP Compliance

Summary

Senior Full Stack Engineer with 9+ years building scalable web platforms, real-money casino game systems, and cloud-native AI/ML pipelines. Expert in HTML5 slot development (Pixi.js, TypeScript), certified RNG-integrated game servers, wallet APIs, and iGaming aggregator integrations. Proven track record delivering full-stack SaaS, healthcare, and e-commerce products with React, Next.js, Django, FastAPI, Laravel, and Node.js, backed by AWS/GCP/Azure DevOps (Kubernetes, Terraform, CI/CD) and production ML workflows (TensorFlow, PyTorch, Kubeflow, LangChain).

Experience

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Freelancer

09/2025 - Invalid date

Senior Full Stack Engineer | Casino Game Developer | AI/ML

Independent consultant delivering HTML5 real-money slot games, full-stack casino platform integrations, and AI-driven player analytics for iGaming operators. Builds Pixi.js game clients, certified backend game servers, wallet/aggregator APIs, and MLOps pipelines on AWS/GCP with Kubernetes and Terraform.

- Developed HTML5 real-money slot game frontends with JavaScript, TypeScript, and Pixi.js—building interactive reel animations, bonus rounds, and particle effects optimized for mobile-first WebGL rendering with canvas fallback.
- Integrated slot game clients with certified RNG game servers via REST and WebSocket APIs, ensuring the client remains an untrusted display terminal while all game logic, win calculation, and audit logging execute server-side per GLI-19 compliance patterns.
- Built wallet integration middleware connecting game servers to operator wallet APIs with idempotent bet/debit and win/credit transactions, Redis-backed session state, and Kafka event streaming for asynchronous settlement and regulatory audit trails.
- Implemented Spine 2D animation pipeline with TexturePacker asset optimization, Webpack/Vite bundling, and Chrome DevTools profiling—reducing initial load times by 35% across 12 slot titles.
- Designed game math configuration services and RTP tuning dashboards using React, TypeScript, and FastAPI, enabling product teams to adjust reel strips, paylines, and bonus feature weights without code deployments.
- Integrated games with B2B aggregators (SoftSwiss-style wallet callbacks, session launch tokens, and jurisdictional content filtering) using Node.js/Express and Python FastAPI microservices on Kubernetes.
- Containerized game server and wallet services with Docker, deployed on AWS EKS via Argo CD and Terraform IaC, with CloudWatch/Prometheus monitoring and GLI-19-compliant immutable audit logs stored in PostgreSQL.
- Built AI-powered player personalization engine using Python, scikit-learn, and PyTorch—predicting churn and recommending game lobby ordering, increasing session length by 18% in A/B tests.
- Developed RAG-based responsible gaming assistant with LangChain, OpenAI GPT-4, and vector databases (Pinecone) to surface limit-setting guidance and session summaries for regulated markets.
- Led full-stack delivery of operator back-office portal using Next.js, React, Tailwind CSS, and NestJS—managing game catalog, RTP controls, and real-time session observability dashboards.
- Architected CI/CD pipelines with GitHub Actions, Jenkins, and GitLab CI—automating Pixi.js asset builds, game server integration tests, and blue-green Kubernetes deployments across staging and production.
- Implemented automated testing with Jest, Cypress, Playwright, and pytest for game client UI flows, wallet API contract tests, and RNG outcome verification suites targeting 85%+ coverage.
- Configured Nginx reverse proxies and CloudFront CDN for low-latency game asset delivery; applied Cloudflare DDoS protection and edge caching for global operator deployments.
- Built real-time analytics pipeline using Apache Kafka, ClickHouse, and Grafana—tracking spin events, bonus triggers, and session metrics for LiveOps and compliance reporting.
- Developed SaaS healthcare modules using PHP Laravel 10, Vue.js with Inertia.js, and React.js—integrating HL7/FHIR via Mirth Connect and Stripe payment flows for telehealth clients.
- Managed Kubernetes clusters with Istio service mesh, Terraform IaC, and Ansible automation; reduced infrastructure costs 20% via AWS Lambda/Fargate serverless workloads for non-game services.
- Integrated ML models into production using KubeFlow pipelines, Docker, and Kubernetes—deploying TensorFlow and PyTorch inference endpoints with sub-200ms latency for fraud detection and player segmentation.
- Collaborated with UI/UX designers to implement Figma and Adobe XD designs into responsive SPAs using React 18+, Redux, Context API, Material UI, Ant Design, and Tailwind CSS.
- Built Storybook component libraries and design systems with TypeScript, SvelteKit, and Gatsby.js—standardizing game UI widgets, lobby cards, and operator admin panels across projects.
- Designed RESTful and GraphQL APIs with Swagger/OpenAPI for 30+ microservices; integrated Apollo GraphQL Server with Django and FastAPI backends for flexible game catalog queries.
- Optimized Snowflake SQL scripts and Apache Airflow DAGs for ETL across operator reporting, implementing Zero-Copy Cloning for large dataset versioning in development and testing environments.
- Mentored junior developers on full-stack best practices, casino game architecture (client/server separation, RNG certification), and MLOps workflows in Agile/Scrum environments.

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IT Labs

03/2023 - 08/2025

Senior Full Stack Engineer | iGaming Platform | Cloud DevOps

Led full-stack and iGaming platform engineering for enterprise clients—building HTML5 casino games, operator integration layers, and cloud-native microservices on AWS/GCP. Delivered scalable DevOps pipelines, AI/ML analytics, and compliant game server architectures with certified RNG backends, wallet ledgers, and aggregator APIs.

- Architected iGaming game aggregation layer normalizing bet/win/rollback callbacks from multiple slot providers into a unified wallet API—handling idempotent transactions with PostgreSQL ledger and Redis session cache.
- Built HTML5 slot game portfolio using Pixi.js, TypeScript, and Webpack—delivering 8 real-money titles with Spine 2D animations, sound integration, and WebSocket real-time balance updates for European operators.
- Developed certified game server backend in Python FastAPI and Go—implementing cryptographically strong RNG outcome selection, win calculation engine, state machine, and immutable audit logger aligned with GLI-19 interactive gaming standards.
- Integrated Pragmatic Play-style and in-house game content with operator platforms via REST wallet APIs, session validation, anti-tamper checks, and jurisdictional RTP configuration per MGA and UKGC requirements.
- Led design and deployment of AWS Lex chatbots integrated with Amazon Connect and Lambda, automating customer service workflows and reducing operational costs by 30%.
- Architected personalized marketing campaigns using AWS Pinpoint with real-time segmented messaging and A/B testing, boosting player engagement by 45% for casino operator clients.
- Built end-to-end BI solutions with AWS QuickSight, Redshift, and Athena—delivering interactive dashboards for game performance, GGR, and session analytics, cutting reporting time by 50%.
- Streamlined data pipelines using AWS Glue, S3, and QuickSight with ML Insights—automating data processing and reducing manual reporting by 70%.
- Built end-to-end microservices using FastAPI, React, and TypeScript for real-time AI-driven analytics and operator back-office tooling.
- Developed secure REST and GraphQL APIs for ML and RAG pipelines, integrating OpenAI, LangChain, and vector databases for intelligent document processing and player support automation.
- Implemented user interfaces with React, TypeScript, Redux, and Material-UI—improving UX latency by 25% across operator admin and game lobby applications.
- Integrated Kafka and Spark Streaming for real-time event ingestion—processing spin events, wallet transactions, and compliance audit streams at 50K+ events/minute.
- Built intelligent document-processing microservices for KYC/AML claim extraction and validation using Python, Django, and FastAPI.
- Developed multi-agent AI platform using FastAPI and LangGraph with orchestrated tool-use workflows for internal automation and customer support.
- Containerized all services with Docker; automated CI/CD via GitLab, GitHub Actions, Argo CD, and Terraform—IaC provisioning VPC, EKS, RDS, and ElastiCache across AWS accounts.
- Managed Kubernetes clusters with Istio service mesh for mTLS between game server, wallet, and lobby BFF services; implemented HPA and pod disruption budgets for peak traffic events.
- Spearheaded Pimcore data management projects with Shopify and WordPress integrations—custom modules, workflow optimization, and legacy e-commerce migrations driving client revenue growth.
- Developed SaaS and healthcare platforms using PHP Laravel 10, Vue.js/Inertia.js, and React.js—10,000+ MAU telehealth platform with HL7, FHIR, NCPDP compliance and Datadog monitoring.
- Built REST APIs with Laravel Queue, Eloquent ORM, Algolia/Typesense search, and Laravel Nova admin for CRM projects using Nuxt.js, Alpine.js, and Tailwind CSS.
- Developed Python ML scripts with Pandas, scikit-learn, TensorFlow, PyTorch, and JAX; orchestrated Kubeflow pipelines and AIOps tooling for model training, deployment, and IT automation.
- Designed robust data pipelines with Apache Airflow and AWS Data Pipeline—supporting ML model lifecycle, operator reporting, and Snowflake transformations with Zero-Copy Cloning.
- Built SPA applications with Next.js, Vue.js, Angular, tRPC, NestJS, Java Spring Boot, and Python Django—30+ microservices documented with Swagger/OpenAPI.
- Implemented TDD with Jest, Cypress, Puppeteer, Mocha, Chai, and WebDriver—enforcing quality gates in CI/CD before production Kubernetes promotions.
- Integrated payment systems (Stripe), Google Analytics/GTM, and secure data stores: MySQL, PostgreSQL, MongoDB, Redis, RabbitMQ, MQTT, and Oracle PL/SQL across microservices.
- Configured Nginx and Apache Tomcat for load balancing and HTTPS; automated AWS deployments with boto3 across EC2, S3, RDS, Lambda, DynamoDB, API Gateway, ECS, EKS, CloudFormation, and CDK.

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- Automated Azure tasks via Azure CLI, Monitor, Data Factory, Databricks, Synapse, and Dynatrace; deployed GCP Compute Engine, Cloud Storage, Cloud SQL, BigQuery, and AI Platform workloads.
- Integrated CI/CD with Jenkins, CircleCI, Travis CI, and GitLab Actions on Kubernetes-as-a-Service platforms; conducted code reviews and mentored team on SDLC and pair programming practices.

customer.io

06/2015 - 04/2018

Full Stack Engineer

Architected and developed large-scale document analysis, e-commerce, and SaaS platforms from scratch using Python, Django, FastAPI, React, and AWS. Built multi-tenant systems, real-time APIs, distributed NLP/ML pipelines, and secure cloud infrastructure while delivering responsive frontends and DevOps automation across healthcare, marketing, and analytics domains.

- Architected full-stack authorship determination platform: FastAPI REST API with PostgreSQL (complex SQL, schema design, query optimization), AWS SageMaker ML inference—processing 500,000+ document analyses daily at 94% accuracy.
- Built end-to-end document analysis system with FastAPI async endpoints, Apache Airflow orchestration, AWS EMR distributed processing, and PostgreSQL linguistic feature storage.
- Developed real-time AI content detection API with sub-200ms latency using AWS Lambda, PostgreSQL caching, and 100,000+ daily detection requests.
- Created plagiarism detection engine: FastAPI with rate limiting, AWS Elasticsearch similarity search, TF-IDF/cosine similarity algorithms in Python.
- Designed multi-tenant SaaS architecture: FastAPI tenant isolation middleware, AWS ECS, RDS PostgreSQL row-level security, S3 document storage—FERPA/GDPR compliant.
- Built real-time document analysis dashboard with GraphQL/REST endpoints, AWS API Gateway, WebSocket live updates, and PostgreSQL analysis history.
- Implemented document ingestion pipeline: AWS Kinesis streaming, Python text normalization workers, PostgreSQL job tracking.
- Deployed containerized infrastructure on AWS EKS with Docker, CI/CD automated testing (pytest, integration tests), and PostgreSQL automated backups.
- Optimized cloud costs 40% via Redis caching, AWS spot instances, and Lambda auto-scaling policies.
- Developed responsive e-commerce web application using Python Django, Flask, React, Next.js, and React Native—1M+ MAU with 15% engagement increase.
- Engineered SSR in Next.js/React/Redux for healthcare application; built RESTful APIs with Django, Flask, and Node.js/Express.js.
- Implemented GraphQL and REST APIs optimizing data fetching—reducing API requests by 30% across 5 projects.
- Integrated MongoDB and PostgreSQL with TypeORM connection pooling, caching, and replication for healthcare records and transactions.
- Built infrastructure with MySQL, PostgreSQL, SQLite, MariaDB, RabbitMQ, CouchDB, DynamoDB, Redis, MQTT, and D3.js/Chart.js/Highcharts visualizations.
- Developed real-time chat with ActiveMQ, Apache Kafka, Amazon SNS, and Kinesis; automated testing with Jest, Mocha, Cypress, Chai, and Enzyme.
- Implemented CI/CD with Jenkins, CircleCI, GitLab, and GitHub Actions; maintained Snowflake data warehouse with custom Airflow operators and hooks.
- Utilized Ansible, Terraform/Checkov, and Kubernetes for IaC deployments; boto3 integrations for S3 and on-premises data exchange.
- Managed AWS services: EC2, S3, DynamoDB, Lambda/Fargate, RDS, ELB, ElasticSearch, IAM, SQS, SNS, Glue, API Gateway, Athena, Redshift, ECS, EKS, AppSync, CloudFront, Cloudflare.
- Maintained Azure Data Factory pipelines, Azure Monitor, Databricks, Synapse; deployed GCP CDN and caching for performance optimization.
- Built streamlined media management with Python Django, FastAPI, React.js, D3.js, and Chart.js; E-commerce storefront with AngularJS/Angular and ES6 JavaScript.
- Developed SQL queries and stored procedures with Oracle PL/SQL and NoSQL MongoDB—25% query response time reduction.
- Maintained React design system and component library; automated networks with Ansible, Terraform, Docker, and Kubernetes.
- Configured Nginx reverse proxies and load balancing; conducted Unix performance tuning and cross-platform React Native mobile development.
- Applied J2EE, Servlets, SOAP, HTML5, CSS, XML web development patterns; integrated Tibco JMS and AMQ messaging services with JBOSS and Tomcat application servers.
- Leveraged Git/GitHub version control; developed with Java, C, C++, Perl, Python, and FORTRAN for legacy integration and data processing projects.

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- Conducted code reviews, mentored junior developers, and led Agile SDLC delivery with strong OOP, design patterns, and software architecture principles.

Education

Hong Kong University of Science and Technology
Bachelor's degree of Computer Science

08/2011 - 03/2015