Daniel Blandes

Software Engineer
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Professional Summary

Experienced Software Engineer with 7+ years of experience in designing high-performance APIs, scalable microservices, and cloud-native solutions. I specialize in optimizing system performance, reducing latency, and implementing CI/CD pipelines. Skilled in collaborating with cross-functional teams to deliver innovative product solutions, I am passionate about writing clean, tested, and maintainable code aligned with SOLID principles. My expertise in leveraging cutting-edge technologies ensures successful project execution and alignment with both technical goals and business objectives.

Technical Skills

Backend: Python, FastAPI, Django, Flask, RESTful APIs, GraphQL
Frontend: JavaScript, TypeScript, React.js, Next.js, Vue.js, HTML, CSS
Databases: PostgreSQL, MySQL, MongoDB, Redis, DynamoDB, SQLite
Cloud: AWS (Lambda, S3, SQS, SNS, API Gateway, RDS, CloudFront, Route 53, VPC)
DevOps: Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins, GitLab CI/CD)
Testing: PyTest, Unit/Integration Testing, Swagger/OpenAPI
Security: OAuth 2.0, JWT, API Gateway
Software Development Lifecycle (SDLC): Agile, Scrum, Jira
Object Oriented Programming (OOP), Microservices, Containerization, Cloud Computing, Serverless Development, Design Patterns, Authentication and Authorization, Concurrent Programming, Troubleshooting and Debugging, User Interface, User Experience, Version Control, Performance Optimization.

Experience

University of Chicago, Research Computing Center | Software Developer | Chicago, IL 2025 – Present

- Architected production-ready research data management system integrating InvenioRDM, FastAPI, and Globus Transfer Service with 17 RESTful APIs, enabling researchers to upload multi-TB datasets 10x faster, achieving 150+ automated tests with 85%+ coverage and HMAC-authenticated webhook synchronization.
- Engineered enterprise-grade open-source energy visualization libraries published to GitHub and NPM, eliminating 370KB legacy dependencies and 5,000+ lines of duplicate code through TypeScript modularization, reducing dataset processing time by 90% (from hours to 15-20 min) via intelligent automation with 90% header detection accuracy.
- Designed Enhanced High-Availability Architecture targeting 99.99% uptime with three-layer failover system (Keepalived + HAProxy + Traefik), reducing planned downtime from 20 minutes to zero and unplanned failover from 15-60 minutes to sub-5-second automatic recovery, enhancing DDoS protection and enabling continuous deployment.
- Led end-to-end technical recruitment screening of 29 candidates and conducting 11 structured interviews, while authoring reusable a Resume Evaluation Framework and a Technical Interview Evaluation Guideline that transformed ad-hoc hiring into repeatable, scalable process for team growth.
- Developed full-stack molecular visualization platform for CD4DC research using Next.js 16, React 19, and JSmol supporting 6 molecular file formats (PDB, CIF, XYZ, MOL, SDF, MOL2), enabling browser-based 3D structure viewing with real-time GitHub API integration, eliminating local software installation for chemistry researchers.

IT-Plex | Software Engineer | Remote US 2020 - 2024

- Architected a scalable, fault-tolerant microservices system leveraging AWS Lambda, SQS, and SNS to optimize real-time payment processing, enhancing system resilience and enabling the platform to handle thousands of transactions per second with minimal latency.
- Developed RESTful APIs using Python, FastAPI/Django to enable secure and efficient communication between backend systems and client applications, reducing system response time by 40% and significantly improving the application's overall performance.
- Collaborated with front-end developers to seamlessly integrate user-facing components with server-side logic utilizing JavaScript, React.js, Python, FastAPI, and NoSQL, leading to a substantial enhancement in application responsiveness and efficiency, reducing average load times.
- Developed and maintained automation scripts using Python and PyTest to streamline testing processes, improve software reliability, and minimize manual intervention, leading to a 2x increase in test coverage and a reduction in post-release issues by 40%.
- Implemented CI/CD pipelines leveraging Jenkins and GitHub Actions to automate testing, optimize deployment workflows, and enhance software reliability, resulting in twice the deployment speed and higher code quality by catching 30% more issues before production.
- Implemented a highly intuitive, enterprise-level web interface leveraging React.js, significantly enhancing platform responsiveness and usability, leading to a more seamless user experience and an increase in user session duration and engagement by 25%.

CENI | Software Engineer | Lome, Togo 2018 - 2020

- Identified bottlenecks in a high-traffic Django REST API, refactored database queries using Django ORM optimizations (select_related, prefetch_related), and implemented Redis caching, reducing response time by 30%, improving system scalability and user experience.
- Engineered an API authentication using OAuth 2.0 and JWT, strengthening system security, enhancing user access control, and significantly minimizing unauthorized access incidents, resulting in a decrease in security breaches and a more resilient authentication framework.
- Integrated mobile money payment gateways using Python, Django, and third-party APIs to enable seamless and secure transactions for payments, enhancing user experience, which led to a significant boost in customer adoption and an increase of company revenue by 30%.
- Executed the development and implementation of a scalable architecture using Docker containerization, deploying endpoints across twelve servers to enhance system scalability and performance by 50% during peak usage while ensuring seamless service delivery.
- Created comprehensive and well-structured API documentation using Swagger/OpenAPI, enhancing clarity, usability, and maintainability,

which streamlined developer onboarding and improved development efficiency, leading to faster adoption and fewer implementation errors.

- Optimized SQL database performance by refining queries, indexes, and stored procedures, significantly enhancing system efficiency, accelerating data retrieval speeds by 1.5x, and reducing system response times by 50%, improving user experience & operational productivity.

Education

Maharishi International University | Fairfield, IA 2023
Master of Science in Computer Science

UCAO-UUT | Lome, Togo 2013
Bachelor of Science in Computer Science