Tobias Czyzewski

Cloud Architect & Full Stack Developer | IT Contractor

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BIDFLOW TECHNOLOGIES

SUMMARY

I specialized in developing effective and innovative enterprise-scale cloud and software solutions. With more than 6 years of experience in IT business and cloud solution development in highly challenging environments, I make sure to deliver quality with scalability, cost effectiveness and future reliability in mind. Actively leading business operations and playing key roles in previous projects shaped my effective approach to professional collaboration and ownership in difficult environments. Excellent work ethic to get things done.

EXPERIENCE

Managing Director/Solutions Architect/Full Stack Developer 01.2020 – present
BidFlow Technologies

- building and running systematic electronic trading operations in the cloud (AWS-native, built entire solution architecture from scratch, low-latency and event driven)
- strong experience in Domain Driven Design in the financial sector
- strong experience in developing highly scalable cloud solutions and microservice architectures on AWS
- strong experience in developing and deploying production-grade backend services with JavaScript / TypeScript (Node.js, Ts.ED), Java (Spring Boot) and Rust
- architecture includes a highly scalable real-time data streaming pipeline that streams and warehouses financial Big Data from arbitrary providers and normalizes it for real-time consumption in downstream systems (historical data is used for in-depth analysis and data-driven decision making)
- expanding BidFlow Technologies' trading platform on a continuous basis involves event-driven solution architectures, Big Data management, DevOps, distributed systems, backend/frontend development, data science and more

Tech: AWS (Organizations, IAM, CloudFormation, VPC, Route 53, API Gateway, EC2, ECR, ECS, ElastiCache, Lambda, S3, DynamoDB, CloudWatch, Athena, Cognito, Amplify, AppSync, SNS), IaC (Terraform), CI/CD (GitLab Pipelines, GitHub Actions), DevOps, Microservices, Docker, Container Orchestration, Data Processing and ETL Pipelines, JavaScript/TypeScript, Node.js, Ts.ED, React, Java, Rust, protobuf, gRPC, (No)SQL databases (PostgreSQL, MongoDB), Redis, Python, Machine Learning, AI, Jira, Confluence

Solutions Architect/Full Stack Developer 06.2024 – 06.2025
Client: E.ON Digital Technology

- played a key role in a newly established IT infrastructure team with significant impact on the design and development of a completely new AWS cloud solution (highly scalable API facade to unify and centralize various business domains)
- experience in Domain Driven Design in the energy sector
- API facade became an important component in E.ON's larger ecosystem of smart home services that manage solar panels, heat pumps, electric vehicles (EVs), batteries etc. in flex tariffs (higher-level goal with flex tariffs: utilize the grid to establish virtual power plants (VPPs))
- strong experience in optimizing solution architectures for maintainability, scalability and cost-effectiveness
- established state-of-the-art identity and access management mechanisms including advanced security concepts as well as identity federation
- delivered quality set the bar to a new level in the whole division

Tech: AWS (Organizations, IAM, CloudFormation, API Gateway, ElastiCache, Lambda, CloudWatch, Cognito), IaC (AWS CDK), CI/CD (GitLab Pipelines), DevOps, Microservices, Docker, JavaScript/TypeScript, Node.js, Ts.ED, React (E.ON Home frontend), Redis, Python, Auth0, OAuth 2.0, SAML, Jira, Confluence

Research Assistant 04.2019 – 03.2021
Kiel University

- collaborated closely with Computer Science professors and colleagues to run university teaching operations (assignment feedback, exam supervision, exam feedback)
- professors and colleagues alike valued my dedication and quality of work
- experience in developing backend services with Java Spring Boot in the context of academic exercises

Tech: Linux, Java, C, C++, Qt, OpenCV

Founder of "The Dawnless Days" 03.2014 – 09.2018
Open Source

- built an international core team (some team members are involved in the project to this day)
- project is known for industry standard quality (managed to deliver highest quality even if it is an open-source project)

Tech: C, OpenGL, 3ds Max, ZBrush, Adobe Substance 3D, Adobe Photoshop, CA Assembly Kit

EDUCATION

Master studies in computer science 10.2019 – 06.2024
Kiel University

Bachelor's degree in computer science 10.2016 – 10.2019
Kiel University

- Bachelor thesis:
  Simultaneous Localization and Mapping (SLAM) for the Formula Student Team Kiel
  - **thesis grade:** 1,0

ADDITIONAL ACHIEVEMENTS

Scholarship "Deutschlandstipendium" 10.2016 – 10.2021
Kiel University

LINKS

tobiasczyzewski.com
bidflow-technologies.com
linkedin.com/in/tobias-czyzewski

LANGUAGES

German (native)
English (proficient, C1)

CERTIFICATIONS

AWS Certified Data Engineer - Associate

EXPERTISE

Cloud Solution Architectures
notably: Domain Driven Design, Event-Driven Architectures, Microservices, Distributed Systems

Amazon Web Services
notably: Organizations, IAM, CloudFormation, VPC, Route 53, API Gateway, EC2, ECR, ECS, ElastiCache, Lambda, S3, DynamoDB, CodePipeline, CloudWatch, Athena, Cognito, Amplify, AppSync, SNS

Infrastructure as Code
notably: AWS CDK, Terraform

Microservices / Distributed Systems
in particular: containerization with Docker, orchestration with AWS ECS and Kubernetes, event-driven architectures

Low-Latency Event-Driven Architectures
in particular in the context of high-speed electronic trading

Big Data Management and Analytics
in particular: real-time data streaming, ETL pipelines, data warehousing

DevOps, Continuous Integration processes
notably: GitLab Pipelines, GitHub Actions

Web Development
in particular: HTML, CSS

Mobile App Development
notably: Swift for iOS, Firebase

(No)SQL Databases
in particular: PostgreSQL, MongoDB (Atlas), AWS DynamoDB

Unit Testing / Test Driven Development

JavaScript / TypeScript
frontend: React and Angular
backend: Node.js, Ts.ED

Rust
notably: tokio, tonic, low-latency architectures

Python
in particular: pandas, numpy, TensorFlow, Dask, Plotly, Jupyter Notebook

C and C++
notably: Qt, OpenCV, OpenGL, ROS

Java
notably: Java Spring, Java Spring Boot