MICHAEL IWANEK

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EDUCATION

B.S - Computer Science, Oregon State University - School of Electrical Engineering and Computer Science 2022 - Mar 2024
Graduated; Major GPA: 4.0
-Completed Coursework: Algorithms, Data Structures, Operating Systems, Discrete Math, CS 161/162, x86 Assembly, Web Dev, Databases, Software Eng I, Mobile Dev, Software Eng II, Computer Networks, Computer Graphics, Capstone
-CodePath Advanced Technical Interview Prep Summer 2023; Honor Roll 2022-2024

B.S - Business Administration (Accountancy), Sacramento State University 2017 - 2018
Graduated; Major GPA: 3.94; Beta Alpha Psi VP of Info Systems Spring 2018; Graduated

SKILLS

Languages C#, TypeScript, C++, C, React.js, Express, Node, MongoDB, Python, JavaScript, Java, GraphQL, SQL, PostgreSQL
Software RabbitMQ, Boto3, AWS, ECS, Docker, Jira, Bitbucket, Axios, Postman, AWS CDK, SQL Server Mgmt Studio, Git

WORK EXPERIENCE

Full Stack Software Engineer **06 2023 - Present**
PNNL - Pacific Northwest National Laboratory Hybrid - Richland, WA
*Internship previous to 04/2024

- Develop reusable React.js/TypeScript components for an enterprise level application, under direct supervision of senior software engineers. Leverage CSS frameworks (Tailwind/Blueprint) to create responsive UI elements per Figma mock-ups, such as modals, navigation menus, forms, and grids. Implement TypeScript features such as interfaces and generics to add static typing/type safety to JavaScript (e.g - GraphQL codegen), and detect errors in compilation before code is deployed to production. Utilize the Apollo client to interact with data from the GraphQL server, via queries and mutations. Use state management libraries such as XState (finite state machines/ deterministic state transitions) to avoid prop drilling.
- Program features for .NET APIs in C#, while concurrently developing the front end and other services in languages such as Python. Create new GraphQL resolvers to query data against the PostgreSQL database (AWS RDS) with EF Core (IQueryable/LINQ). Add new C interfaces/classes to implement timed background services (IHostedService), case insensitive filtering, pagination, kickoff RabbitMQ message broker services to produce/consume data, and interact with AWS resources such as S3 buckets.
- Create Python microservices for tasks such as importers/database operations, or to programmatically deploy AWS resources to the cloud (AWS CDK), such as AWS Lambdas (Boto3), CloudFormation stacks, SNS Subscriptions/Topics, and endpoints.
- Use computer vision machine learning libraries such as Detectron2 to train PyTorch models on labeled image COCO datasets/ Juptyer Notebooks. Deployed models to AWS SageMaker HTTP endpoints to make inferences from submitted images.

Senior Accounting Officer - Recon/Data Specialist **07 2020 - 06 2023**
State of California (CalSTRS - California State Teachers' Retirement System; CalPERS) Sacramento, CA

- Developed complex macros programmed in VBA to automate data retrieval from SAP and manual Excel workpaper preparation. Performed various accounting reconciliations, interface testing, journal entries, and accruals for a pension fund with over 300 billion in assets, in a senior analyst role using SAP and Excel. Managed databases and developed advanced SQL queries to aggregate/summarize records, join tables, and analyze data sets for conversion errors.

PROJECTS

Ski and Rock Climbing E-Commerce Store (.NET/ C#/ TypeScript / AWS ECS) - GitHub - Live

- Developed a full-stack website (REI/Amazon clone) with product search, filtering, OAuth2.0, shopping carts, PayPal API, and order submission. A C# API uses Entity Framework Core to communicate with a PostgreSQL database - hosted on AWS RDS.
- Deployed on an AWS Elastic Container Service (ECS) cluster via serverless AWS Fargate. Implemented a CI/CD pipeline via a GitHub Actions .yml file which re-builds and deploys new docker images to ECR/ECS for the front/back end. This runs whenever new commits are pushed to the docker branch (main runs on Heroku). Added EC2 load balancer and custom domain.

PyTorch Image Classification App (Python/TypeScript) - GitHub - Live - Video

- A full stack website where users can upload images or image URLs to a deployed PyTorch Faster R-CNN computer vision model. An Express.js server utilizes AWS API Gateway to invoke a Lambda, which calls the model and runs the image through a trained neural network. Then the front end plots the resulting class accuracy scores and bounding boxes on the image.

Portfolio Website - Additional Projects (React.js/ EC2) GitHub - Live