

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 | Honor Roll 2022-2024

- 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

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

SKILLS

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

WORK EXPERIENCE

Full Stack Software Engineer

PNNL - Pacific Northwest National Laboratory

06 2023 - Present

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/ Jupyter Notebooks. Deployed models to AWS SageMaker HTTP endpoints to make inferences from submitted images.

Senior Accounting Officer - Recon/Data Specialist

State of California (CalSTRS - California State Teachers' Retirement System; CalPERS)

07 2020 - 06 2023

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](#)

- A full-stack REI/Amazon clone with product search, filtering, OAuth2.0, shopping carts, PayPal API integration, and order submission. A C# API uses Entity Framework Core to communicate with a PostgreSQL database - hosted on AWS RDS.
- Deployed on an AWS ECS cluster via serverless AWS Fargate. Implemented a CI/CD pipeline via a GitHub Actions .yaml file which re-builds and deploys new docker images to ECR on repo changes. Provisioned the instance with an EC2 Load Balancer and configured domain routing via Route 53.

PyTorch Image Classification App (Java Spring Boot/ Flask/ TypeScript/ EC2) - [GitHub](#) - [Live](#) - [Video](#)

- A full stack website (EC2 instance), where users can upload images or image URLs to a deployed PyTorch Faster R-CNN computer vision model. A Java Spring Boot API invokes a Flask microservice, to pass an image through a trained neural network. The front end plots the resulting class accuracy scores and bounding boxes on the image from the model's response.

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