# Anthony Marinov

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## EDUCATION

**Master of Science in Structural Engineering (Computer Science Focus)** | University of California, San Diego | **GPA: 4.0/4.0** June 2026
**Bachelor of Science in Structural Engineering** | University of California, San Diego | **GPA: 3.88/4.00** June 2025

## SKILLS

- **Languages:** Java | Python | C | TypeScript | JavaScript | C++ | SQL | Bash | HTML/CSS | MATLAB
- **Technologies:** Docker | Git | MySQL | Transformers | Amazon Web Services (AWS) | Linux
- **Frameworks & Libraries:** Spring Boot | Django | Next.js | React.js | Node.js | Jest | Jenkins | JUnit | Tensorflow | PyTorch
- **Programs:** Abaqus | Solidworks | SAP 2000 | RISA | LabVIEW | AutoCAD | Revit | Excel
- **Hardware:** Sensors | Data Acquisition | Signal Processing | Spectral Analysis | Structural Health Monitoring
- **Engineering:** Finite Element Analysis (FEA) | Product Design | Composites | Steel | Concrete | Timber

## EXPERIENCE

**Amazon | Software Development Engineer Intern** June 2025 - Sept. 2025

- Architected and launched a retry mechanism for transactional notifications in the new customer experience (CX) architecture, resulting in 550,000 additional new CX notifications being sent per day worldwide
- Streamlined exception handling across multiple interconnected services, bringing the logic ownership to a single service
- Developed a system for monitoring notification rendering failures in the new CX architecture, giving away teams the ability to independently monitor and set alarms on rendering failures for the notification templates they own

**MiTek | R&D Engineer Intern** June 2024 - Sept. 2024

- Led the creation of an AI generative design program using Python, XGBoost, and TensorFlow, alongside a cost and time estimation tool in Excel, to optimize lateral system design for wood light-frame construction
- Collaborated with cross-functional teams to establish a new design philosophy for MiTek's lateral solutions, reducing construction time by up to 20% with minimal cost impact through data-driven insights from the program
- Created a comprehensive documentation package for internal distribution and delivered a tutorial presentation to global team leadership, detailing the program's features, usage, and potential for further development

**Alpha MM Inc | Software Engineer Intern** June 2023 - June 2024

- Developed a custom full-stack CRM application using Python, Django, and MySQL to manage client information, project scheduling, invoicing, and financial tracking
- Established an efficient CI/CD pipeline with Jenkins and Docker, automating unit testing and deployment to AWS for streamlined integration and delivery
- Designed a machine learning pricing and expense model using TensorFlow in Python, improving client quoting accuracy and project expense estimation, which increased project margins by 7% on average

## PROJECTS

**Custom Generative Pretrained Transformer (GPT)** | *(Python, PyTorch)* anthonymarinov/custom-gpt

- Developed a custom Transformer model in PyTorch inspired by GPT-2 and the *Attention is All You Need* paper to generate Shakespearean-style text
- Implemented multi-head self-attention, positional encoding, and layer normalization with optimizations (residual connections, dropout, manual attention) to improve performance and reduce overfitting

**Soil-Water Retention ML Model** | *(Python, Keras/Tensorflow, Sklearn, Matplotlib)* anthonymarinov/soil-water-retention

- Developed non-isothermal machine learning models to predict soil saturation based on matric suction and user-specified temperatures, extending capabilities beyond traditional isothermal models
- Optimized model performance using cross-validation and custom loss functions, ensuring accurate predictions across varying geotechnical conditions