

EDUCATION

- **Bellevue College** Bellevue, Washington
Bachelor of Science - Computer Science GPA: 3.6/4.0 *September 2018 - June 2022*
Upper-Division Courses: Deep Learning, Machine Learning, Algorithm Analysis, Software Engineering, Operating Systems, Cloud Computing

EXPERIENCE

- **Boeing** 10/13/2023 - Present
Software Engineer
 - Engineered a highly configurable build/test execution pipeline with GitLab CI/CD, streamlining daily workflows now used by hundreds of internal engineers across the program.
Tech: GitLab CI/CD, Python, C++, Docker, Bazel
 - Overhauled a test framework to adopt a more modular and extensible architecture; capable of accepting software modules and tests built for a wide range of hardware targets.
Tech: C++, Bazel, Python, Docker
 - Optimized test execution time by a factor of **n** by creating a custom load balancer from scratch, enabling efficient parallel testing of multiple software modules.
Tech: AWS EC2, Python, Bash, GitLab Runner
 - Developed test cases and scripts compliant to DO-187C standards and conducted testing in QEMU virtual machines, closely replicating physical hardware environments for validation.
Tech: QEMU, Python, Bazel, C++, Markdown

SKILLS

- **Languages:** Java, Python, C++, C#, JavaScript/TypeScript, Rust, C, SQL
- **Tools:** Git, Bazel, Docker, MongoDB, MySQL, PostgreSQL, JUnit
- **Platforms:** GitLab, AWS, Firebase, Google Cloud

TECHNICAL PROJECTS

- **Deal! Price Comparison Web Application (Plug-in Architecture, Web Scraping, User Authentication, Full Stack Web Development, Scrum Workflow):** Tech: Java, HTML/CSS, Javascript, Spring Boot, Thymeleaf, Bootstrap, AWS, DynamoDB, Cognito, IAM. <https://github.com/scottti312/deal-webapp>
 - Led a 4 person team to create a full-stack price comparison web application using Java, AWS, and web scraping techniques alongside agile methodology. Created clear deadlines and objectives for each sprint.
 - Worked extensively with AWS API to handle database operations, user authentication, and scalability, resulting in a reliable and efficient platform.
 - Built and improved internal vendor plug-ins to provide product data from retailers 75% faster with parallel processing.
- **License Plate Recognition Ticket Processing System (Image Processing, Computer Vision, Database, Windows Service):** Tech: C#, AWS, S3, Rekognition, Lambda, IAM, SQS, SNS, CloudWatch.
 - Developed a license plate recognition ticket processing system that automates ticketing for traffic violations using captured images of license plates.
 - Tested against 10 license plates from different states with unique edge cases such as icons and plate designs, achieving 100% accuracy and ensuring reliable performance for the client.
 - Notifies users by email or text with relevant ticket information using SNS service, reducing manual labor and streamlining ticket processing.
- **Deep Neural Network With Backpropagation From Scratch (Image Processing, Optimization):** Tech: Jupyter Notebook (Python), Pandas, Numpy. <https://github.com/scottti312/backpropagation>
 - Designed and implemented a Deep Neural Network with the Backpropagation algorithm from scratch, without any ready-made ML libraries such as Tensorflow or Pytorch.
 - Consistently achieved at least 90% accuracy in extensive testing with substantial datasets. Trained network with 60000 labeled data points and tested against 10000 points.