

Nickolas Paraskevopoulos

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Education

Virginia Tech | College of Engineering | Blacksburg, VA

B.S. in Computer Science • 3.6 GPA

MEng in Computer Science • 4.0 GPA

August 2021 – May 2025

August 2025 – May 2026

Experience

U.S Customs & Border Protection (CBP) | Mobile Software Engineer **May 2025 – Present | Ashburn, VA**

- Shipped two **Expo native iOS modules** for on-device detection and recognition of faces and license plates
- **Expo Faces** — Identifies faces in real-time using **YOLO-face** for detection, **3D facial landmark detection** for pose estimation, and **FaceNet** to generate embeddings for comparing similarity of detections across frames
- Buckets detections by cosine similarity and ranks each detection by pose and blur score to keep the best detection
- **Expo Plates** — Detects vehicles and plate boxes on device using a two-tier pipeline with a **YOLO object detector** for vehicles and a fine-tuned YOLO object detector for license plates
- Runs a **Vision Transformer OCR** model on each detection and returns a plate number with per-character confidence scores, grouping similar plate reads together into buckets using Levenshtein distance formula
- Groups similar reads into buckets with Levenshtein distance, maintains a frequency count and the lowest-blur image per bucket, and periodically dispatches the top read and its best image to the client via a callback function

SAIC | Mobile Software Engineer **June – November 2024 | Alexandria, VA**

- Shipped a cross-platform **React Native + Expo** app (Ora Nutrition) for logging meals and tracking progress
- Integrated an AI chatbot via **FastAPI + LangChain + OpenAI API** for meal logging and recommendations; deployed via **Docker** on **Google Cloud Run**
- Implemented barcode scanning, saved meals, and health data integrations; used **Supabase** for user authentication and data storage; added push notifications and engagement features

Pangiam | Software Engineering Intern **May – August 2023 | McLean, VA**

- Built a native **Android mobile application**, aimed at streamlining US-Canadian border crossings for sports teams by authenticating passports and travel documents
- Utilized **Jetpack Compose**, Android's primary UI toolkit, to create an intuitive user interface in **Kotlin**
- Integrated Google's **MLKit Text Recognition library** for Machine Readable Zone scanning, **JMRTD library** for NFC/RFID chip reading, and Pangiam's **Trueface SDK** for one-to-one facial matching, enhancing travel document authentication processes
- Managed on-device **SQLite** database via **Android Room Library** for user account storage

Technical Projects

Direct Drive Now | Flutter • Flask • Socket.io • Twilio API • PostgreSQL

- Built a cross-platform **Flutter** mobile application with a **Flask REST API + Socket.io WebSockets** for real-time ride sharing, driver queues, and status updates
- Integrated **SMS OTP auth** via **Twilio Verify API**; organization-level **RBAC** via **JWT authentication**
- Implemented proximity-aware ride-matching service with built-in capacity gating and ride reassignment system

Nutrition Database Management System | Django • React • PostgreSQL

- Developed a full-stack platform (**Django + React.js**) to manage and analyze nutritional information for on-campus dining facilities, promoting informed dietary decisions and efficient dining hall operations
- Implemented a **Django backend** integrated with **PostgreSQL**, featuring token-based authentication and **RBAC** for students and administrators
- Built custom **Django model managers**, integrated with **BeautifulSoup4**, to parse and scrape dining service webpages and automatically update nutritional data upon triggered scraping events
- Automated periodic data scraping using **Celery**, ensuring up-to-date menu and nutritional information

Relevant Coursework

- Operating Systems (C/Linux/Bash) • Database Management Systems (SQL) • Data Structures and Algorithms(Java) •

Skills

Languages: Java, Python, TypeScript, JavaScript, C, Kotlin, Swift, Dart, SQL, HTML, CSS, XML

Libraries: React, NumPy, Pandas, Matplotlib, scikit-learn

Frameworks/Toolkits: Expo, React Native, NextJS, FastAPI, Django, Flask, Flutter, Jetpack Compose, LangChain

Technologies/Platforms: Linux, Docker, GCP, PostgreSQL, SQLite, Supabase, Firebase, MongoDB, Git, Postman