

# Pongpatapee (Dan) Peerapatanapokin

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## Education

<b>West Lafayette, IN</b>	<b>Purdue University</b>	<b>Aug 2019 – May 2023</b>
<ul style="list-style-type: none"><li>• <b>Major:</b> B.S. in Computer Engineering, (<b>GPA: 3.83 / 4.0</b>)</li><li>• <b>Semester Honors</b> – (6/6) Semesters <b>Dean's List</b> – (6/6) Semesters</li><li>• <b>Relevant Courses:</b> Advance Software Engineering, Data Structures, OOP C++, Digital Sys Design, AI, Networking</li></ul>		

## Skills

- **Languages:** Python, JavaScript, HTML/CSS, SQL, C, C++
- **Frameworks:** FastAPI, Flask, Pytest, NodeJS, Express, ReactJS, Tailwind, TensorFlow, SKLearn, SQLAlchemy
- **Tech:** Git, GCP, CI/CD, Postman, Docker, Linux, Vim, Firestore, MongoDB, Snowflake, Prefect

## Employment

<b>Software Engineer, Intern (Backend)</b>	<b>Interos Inc.</b>	<b>Jun 2022 – Aug 2022</b>
<ul style="list-style-type: none"><li>• Worked in a Scrum team to improve and maintain Backend &amp; API infrastructure</li><li>• Addressed regular production bugs in the Backend (Python - FastAPI, DB - Snowflake) using Jira/Kanban</li><li>• Fixed broken filter in table view and inconsistent values between the map and table view for production</li><li>• Fixed and redesigned Postman tests in CI pipeline</li><li>• Improved Postman tests speed in CI pipeline by ~30% by optimizing docker to run directly from the image</li><li>• Allow for future bulk CSV exports by refactoring/combining Prefect Flow tasks</li></ul>		

### Google - TensorFlow Model Garden

<b>ML Undergraduate Researcher</b>	<b>(Purdue University)</b>	<b>Jan 2022 – Present</b>
<ul style="list-style-type: none"><li>• Collaborating with Google to develop and reproduce exemplar implementation of cutting-edge ML models and algorithms to contribute to the TensorFlow Model Garden</li><li>• Addressing reproducibility issues in ML by contributing to the TensorFlow Model Garden to act as the standard library for future engineers to use and extend existing models</li><li>• Reimplementing the YOLOX computer vision model from the original paper in TensorFlow</li></ul>		

<b>Undergraduate TA</b>	<b>Purdue University</b>	<b>Jan 2022 – May 2022</b>
<ul style="list-style-type: none"><li>• Assisted a class of ~300 students with Data Science and Python concepts such as Data Visualization, Hypothesis testing, Regressions, Clustering, Classification, Training and Testing datasets, Regex, etc.</li><li>• Used Python libraries such as Scikit-learn, NumPy, Pandas, SciPy, and Matplotlib</li></ul>		

### National Science and Technology

<b>Software Engineer, Intern (Data/ML)</b>	<b>Development Agency</b>	<b>Jun 2021 – Aug 2021</b>
<ul style="list-style-type: none"><li>• Researched COVID trends and detection methods with Electronic Noses</li><li>• Collected and Compiled 4 scent datasets with an Electronic Nose</li><li>• Visualized, analyzed, and trained KNN and Logistic regression ML models via Pandas, Seaborn, and Scikit-learn to classify scents from datasets with over 90% accuracy</li><li>• Simplified analysis and training process by developing a GUI using Tkinter in Python</li></ul>		

<b>Undergraduate Researcher</b>	<b>Purdue University</b>	<b>Jan 2020 – May 2020</b>
<ul style="list-style-type: none"><li>• Lead android app developer for the Optical Character Recognition (OCR) application</li><li>• Improved OCR accuracy by ~15% by using Image pre-processing techniques with different convolution filters such as Edge Detection, Edge Enhancement, De-skewing, and Thresholding</li></ul>		

## Projects

### Trustworthy Module Registry (*ECE 461 – Software Engineering*)

- Designed and developed an automatic grading system for NPM modules to characterize their trustworthiness in Python
- Developed and deployed authenticated REST API in Flask to GCP, for users to interact with the “Trustworthy Module Registry”
- Developed a Pytest test suite consisting of Coverage, Unit, and End-to-end tests
- Sped up development by ~30% by automating tests and deployment using GitHub Actions for CI/CD

### Litter Detection AI (*EcoMake Hackathon 3<sup>rd</sup> Place*)

- Develop a camera litter detection system that maps the location of detected litter around the Purdue campus
- Utilized Azure Computer Vision AI to detect litter by sending images from a Raspberry Pi
- Visualized litter coordinates on a website with Google's Geolocation API and a React front-end