Brandon T. Pae

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EDUCATION

Columbia University - *GPA: 3.98*   New York, NY | May 2026
Bachelor of Science, Major in Computer Science & Minor in Entrepreneurship
- Relevant Coursework - Operating Systems, Advanced Programming in C, VR/AR (Unity), Artificial Intelligence, Natural Language Processing, Data Structures in Java, Parallel Optimization for Robotics

Horace Mann High School - *GPA: 3.97 UW, 4.48 W*   Bronx, NY | Jun 2022
- Relevant Test Scores - SAT: 1570, SAT 2 Math II: 800, AP Calculus BC: 5

WORK EXPERIENCE

FluidityIQ, *Software Engineering Intern*   New York, NY | June 2024 – Sep 2024
- Evaluated vectorizer models for patent claims and deployed to production using Azure CI/CD; wrote unit and integration tests with Mockito for the search API, fixing 75% of bugs and reducing latency by 6x
- Configured Langsmith to build a patent dataset, evaluated Gemini responses, and implemented a factory design for LLM swapping; enabled multi-user functionality for the chat API

Artaic, *Software Engineering Intern*   New York, NY | Feb 2023 – Dec 2023
- Created a YOLO model with Roboflow to classify mosaic tiles with 91% accuracy. Also built an interactive map of Artaic's mosaic installations using Google Maps API and WP Go Maps for company website

Capco, *Software Engineering Intern*   New York, NY | Jun 2023 – Aug 2023
- Improved backend code for Commerce Bank's website by fixing 66% of bugs with their entitlements API and creating JSON test payloads with SQL and Python; presented to 30+ senior executives and developers
- Performed k-means clustering to group users for the stock recommendation project; fixed 50% of JSON errors for the consent & preference project to enable API calls between Adobe Marketo and OneTrust

Arrow Electronics, *Machine Learning Intern*   Cambridge, MA & Remote | Aug 2021 – Aug 2022
- Implemented eight machine learning (ML) models with AWS to forecast the price of raw minerals needed for electronics; ran 200+ experiments and used Optuna and ClearML to identify the optimal model
- Developed four ML models using Python and Talos to better predict the end life of electronics parts; resulted in a 68% increase in accuracy and presented findings to 20+ Arrow executives and the sales team

EXTRACURRICULAR ACTIVITIES

Columbia University, *UI Design TA*   New York, NY | Jan 2025 – Present
- Graded homework and projects for User Interface Design (COMS 4170W), held weekly office hours, and helped 600+ students learn full-stack tools like Flask and jQuery

Columbia Organization of Rising Entrepreneurs (CORE), *Almaworks Director* New York, NY | Sep 2022 – Dec 2024
- Directed the Almaworks Accelerator in the Columbia Startup Lab (CSL); coordinated weekly mentorship for 30+ Columbia founders and organized five Demo Day events with VC investors from Bain Capital Ventures
- Led Partnerships in the CORE executive board, enabling collaboration between Columbia and Cornell founders, organizing speaker events with Microsoft and Perplexity, and inspiring new students to join CORE

Columbia Daily Spectator, *Head of Product*   New York, NY | Sep 2022 – May 2024
- Led Spectator's product division; ideated and designed new features for CULPA (Columbia's website for rating professors and courses), including a 4-year course plan, course syllabi & quotes, and review tag filtering
- Collaborated with the Engineering and Engagement teams to implement and promote the new CULPA features, resulting in a 18% increase for website visits

PROJECTS

- **A2R**: Optimized memory-efficient TinyMPC software in C/C++ for Crazyflie drones at the A2R Lab, ensuring integration with Crazyswarm2 (ROS 2)
- **BeetCode:** Developed an assistant for coding interview prep, using React, Flask, GPT-4o, MongoDB, and Supabase. Provided hints for LeetCode problems for 200+ users

SKILLS

Programming Languages: Python, Java, C, C++, SQL, JS, CSS, HTML, PHP, R
Libraries and Tools: Databricks, Docker, Flask, Git, Haystack, Langchain, PyTorch, React, TensorFlow
Cloud and Databases: AWS, Azure, Google Cloud, Milvus, MongoDB, OpenSearch, PostgreSQL