

Agassi Boonprasert

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Education

New Jersey Institute of Technology

Sep 2022 – Dec 2026 (Expected)

B.S. in Data Science

Newark, NJ

- Relevant Coursework: DS340 Applied Data Science / Machine Learning, MATH 478 Statistical Methods in Data Science.

Projects

Insurance Premium Predictor

Spring 2026

Python, XGBoost, scikit-learn, Streamlit, Hugging Face Spaces — DS340, NJIT

Live demo

- Optimized an end-to-end XGBoost regression pipeline on a 200k-row Kaggle dataset, achieving a validation RMSE of 843.83 and RMSLE of 1.1404, by engineering 27 temporal and cyclic calendar features and implementing scikit-learn ColumnTransformers.
- Enhanced model deployment interactivity and transparent analysis, providing validation-residual uncertainty bands ($\pm 1\sigma$) and feature impact rankings, by building and deploying a Streamlit application to Hugging Face Spaces.

Wine Cultivar Classification Study

Spring 2026

R (MASS, class, e1071, randomForest) — MATH 478, NJIT (w/ E. Vargas)

- Evaluated classification performance across 4 statistical frameworks (LDA, KNN, SVM, Random Forest) on a 13-feature dataset, achieving 100% test accuracy on 3 core architectures, by executing 10-fold cross-validation and strict training-set-only scaling to isolate data leakage.
- Isolated the top 5 critical chemical predictors of cultivar origin (Flavanoids, Color Intensity, Proline, Alcohol, OD280/OD315) by extracting and analyzing Random Forest variable importance metrics (Mean Decrease in Accuracy and Gini coefficients).

Bionic Reader — Web App, Extension & Analytics

Apr 2026 – Present

Python, FastAPI, SQLite, JavaScript, Nginx, systemd — agassi.cloud/bionic

- Developed a full-stack reading utility with customizable presentation typography, Text-to-Speech (TTS), and a Pomodoro timer by engineering a robust FastAPI backend featuring 18+ REST endpoints and JWT authentication.
- Quantified cross-device user engagement metrics and conversion funnels by architecting a lightweight, privacy-conscious analytics ingestion pipeline backed by SQLite to safely handle cookie-gated user data.
- Optimized web server responsiveness and delivery performance (TTFB) by productionizing the full-stack architecture behind an Nginx reverse proxy using asset caching, gzip compression, and systemd service scripts.

Private Cloud VPN & Site Infrastructure

Dec 2025 – Jan 2026

Linux, WireGuard, Nginx, Self-hosted Ubuntu Server — agassi.cloud

- Secured personal remote infrastructure access and portfolio web hosting by provisioning an independent cloud server instance running a live, private WireGuard VPN tunnel framework.
- Minimized infrastructure overhead and routing latency by consolidating server application deployments, network interface rules, and cryptographic peer-to-peer tunnels onto a single minimal resource footprint.

Skills

- **Programming & Scripting:** Python, R, JavaScript, SQL, Bash, LaTeX, FastAPI, uvicorn, REST APIs, JWT Auth
- **ML, Statistics & Evaluation:** XGBoost, scikit-learn (Pipelines, ColumnTransformer), LDA, KNN, SVM, Random Forest, Cross-Validation, Feature Engineering, Model Evaluation (RMSE, RMSLE, R^2)
- **Text Extraction & Ingestion:** trafilatura, BeautifulSoup, lxml, PyMuPDF, EbookLib, feedparser
- **Infrastructure & Deployment:** Linux (Ubuntu Server), WireGuard VPN, Nginx, systemd, Let's Encrypt, Git, Streamlit, SQLite, Browser Extensions (MV3)
- **Financial Frameworks:** Bloomberg Terminal, Quantitative Market Data Analysis

Certifications & Languages

- **Bloomberg Market Concepts (BMC)** — Bloomberg (Feb 2024)
- **Languages:** English (Native) · Thai (Native)