Nathan C. Beck

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Education

BSE Computer Science

Princeton University

Fall 2021 – May 2025

- **GPA**: 3.55; Certificates in Statistics/Machine Learning and Applied Mathematics.
- Activities: Residential Advisor, Quiz Bowl, Table Tennis Club, Daily Princetonian Data Writer.

Employment

Software Engineer

Ticket Wallet

Summer 2023

- Spearheaded team of five mobile developers, using Git and Jira for version control and management.
- Developed intuitive and user-responsive mobile application frontend using Flutter based on Figma designs.
- Crafted robust backend using PostgreSQL and Django Rest Framework with REST APIs.

COS126 Lab TA

Princeton University

Aug 2022 - May 2023

- Efficiently help over 20 students weekly debug their Java code for programming assignments.
- Guide students to obtain theoretical knowledge of Java programming.
- Work with other TAs to diagnose common errors and prepare properly for encountering them.

IT Services Worker

IL Valley Community College

Summer 2022

- Created and managed high-availability computer clusters and VMs using Proxmox and Ceph.
- Provided support and catered software needs of 60+ faculty, covering over 500+ computers.

Relevant Coursework

COS333

Adv. Programming Techniques

Fall 2023

• Displayed expertise in full-stack web development by mastering React and JavaScript for front-end design, and Flask and Python for back-end system architecture. Successfully completed hands-on assignments in each language, highlighting a comprehensive understanding of modern web technologies.

COS324

Intro. to Machine Learning

Spring 2023

• Demonstrated proficiency in machine learning techniques, leveraging Python, scikit-learn, and Pytorch to implement cutting-edge algorithms for regression, k-means clustering, and feed forward neural networks, and effectively applying these methods to solve real-world problems.

Projects

- Voice Cloning (Fall 2021). Trained voice models using 100+ voice clips of politicians, and synthesized voices using NVIDIA's Tacotron2 and Waveglow on Princeton's computer clusters with SLURM scripts. Python
- COS126 Statistical Library (Spring 2022). Using object-oriented programming, created a statistical library to calculate functions like polynomial regression using an implementation of Gauss-Jordan Elimination. Java
- Personal Website (Present). Created personal website and published via git on GitHub. HTML/CSS, JavaScript
- **Princeton Art Museum App** (Present). Worked with team of five to build and deploy an app for Princeton's Art Museum to be published on App Store and Google Play Store. **Flutter, Flask, PostgreSQL, AWS**

Skills

- Languages: Python, Java, C/C++, Go, TypeScript
- Web & Mobile: Flutter, HTML/CSS, JavaScript, React, ¡Query
- Databases & Backend: PostgreSQL, Django (Rest Framework), Flask