

# Katrina Parekh

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## WORK EXPERIENCE

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### Freelance

New Haven, CT

#### Software Engineer

05/2023–Present

- Designed forward compatible and user-friendly audio analysis pipelines for processing song metrics, including instrument separation using OpenUnmix, chorus detection using Pychorus, and chroma recurrence using Librosa
- Parallelized word-vector extraction in clients' BERT LLM codebases, porting the codebase to ModernBERT and introducing caching methods to yield a hundredfold reduction in analysis times
- Rapidly gained understanding of CDS GIS Data APIs for Python and Degree Day plant modelling formulas, enabling greater efficiency and clarity of communication while working with clients performing crop suitability analysis for projects in Sub-Saharan Africa

### The PIE Network

New York, NY

#### Founding Engineer

05/2021–02/2022

- Built Firebase backend servers designed to host shortform video and interface securely with Stripe, supporting the running of a hybrid video based social network and eCommerce platform
- Led development of a platform agnostic application codebase using Flutter, tripling development speed for publishing to Web, Android, and iOS, resulting in an estimated \$96k reduction in pre-launch development costs
- Prototyped clear and appealing Mobile App UI using Figma to capture design vision and iterate on user feedback

### Northwestern IT

Evanston, IL

#### Senior Service Desk Analyst

01/2017–06/2020

- Led workplace training for Junior Service Desk Analysts, providing constructive feedback and coaching that improved their ability to quickly and accurately resolve problems
- Trailblazed internal project work migrating the workplace Knowledge Base to a more modern system
- Efficiently solved technical issues ranging from improper software installations to glitches in the university's NetID Authentication systems while communicating clearly to each user in a way best suited to their level of technical literacy

### King George VI Children's Centre

Bulawayo, Zimbabwe

#### Assistant Computer Teacher

01/2015–11/2015

- Volunteered as a computer literacy teacher for special needs children, teaching them to use the accessibility features best suited to their individual needs while instructing them in using the Microsoft Office Suite

## SKILLS

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- **Software:** VSCode, Github, Git, Figma, REST APIs, Visual Studio, Android Studio, Unity, Stata, Firebase
- **Languages:** Python, C#, HTML, CSS, Typescript, Javascript, GDScript, Flutter, Dart, MATLAB, Racket, C, C++, x86 Assembly, SQL
- **Libraries:** Numpy, Librosa, Matplotlib, Pandas, Transformers, SciPy, SciKitLearn, Pychorus, Stripe

## EDUCATION

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### Northwestern University

Evanston, IL

Computer Science, B.S.

2016–2020

### Christian Brothers' College High School

Bulawayo, Zimbabwe

Academic Full Honors

2009–2015

## HONORS AND AWARDS

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- Northwestern International Students' Scholarship (2016–2020)
- Northwestern Scholarship (2016–2020)
- Bulawayo Hindu Society Shield for Best A Level Results (2016)