

# WILLIAM MERRILL

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## EDUCATION

**Yale University**, *B.S. in Computer Science & Linguistics* | New Haven, CT Expected Spring 2019

- GPA: 3.87 / 4.00.
  - Notable core CS courses: Complexity Theory (CPSC 468), Algorithms (CPSC 365), Systems (CPSC 323).
  - Notable NLP courses: Deep Learning Theory (CPSC 663), NLP (CPSC 477), Neural Nets & Language (LING 380).
  - Notable math courses: Real Analysis (MATH 301), Vector Calculus and Linear Algebra (MATH 230/231).
  - Founded Dota 2 team and club, which now has 41 members and competes against other universities.
  - Teaching CS, cryptography, and linguistics classes at local middle schools via CodeHaven and Splash programs.
  - Won 2016 freshman rap battle.
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## RESEARCH EXPERIENCE

**Computational Linguistics at Yale**, *Research Assistant* | Yale University Fall 2016—Present

- Authored paper on deep learning parser for tree adjoining grammar that was accepted to NAACL 2018.

**Language Learning Lab**, *Research Assistant* | Boston College Summer 2017

- Built machine learning models to detect fluency and native language of essays written by Spanish learners.
- Models are being used to automate large-scale online experiments about language acquisition.

**MorphLab**, *Research Assistant* | New York University Fall 2012—Summer 2015

- Managed fMRI brain imaging studies and designed experiment on lexical properties of texting acronyms.
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## PROJECT AND WORK EXPERIENCE

**Google**, *Software Engineer Intern* | New York, NY Summer 2018

- Designing and implementing deep learning project on DoubleClick (ads) team.

**StackNN**, *Creator* | New Haven, CT Winter 2017—Present

- Wrote first open-source implementation of differentiable stacks and queues for neural networks.
- Project has been featured on PyTorch homepage and has 100+ GitHub followers.

**The Book of Thoth**, *Creator* | New York, NY Spring 2016—Present

- Designed natural language puzzle game that has been approved for 2018 publication on Steam.
- Created optimized game engine and hieroglyphic spell interpreter from scratch in Java.

**Yale Student Employment**, *Teaching & Research Assistant* | Yale University Summer 2016-

- Undergraduate learning assistant for NLP (CPSC 477, spring 2018) and AI (CPSC 470, fall 2017).
- Research assistant at conferences on medieval East Asian languages: Tangut (spring 2018) and Kitan (summer 2016).

**Neural Network Dota Drafting**, *Creator* | New Haven, CT Spring 2017

- Designed deep learning model that picks winning teams in the video game Dota 2.
- Placed as a finalist in Yale's Grace Hopper Prize for Computer Science.

**Foodie Call**, *Cofounder & Lead Programmer* | New Haven, CT Spring 2017

- Developed full stack for app and website for food ordering startup.

**Youtube**, *Partner & Content Creator* Spring 2012—Spring 2015

- Ran gaming channel SnorriDevTeam with over half a million views.