

# Joseph A. (Jack) Bosco IV



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🎓 Washington and Lee '2024  
Computer Science BA | Data Science Minor  
Major (CSCI) GPA: **3.96** | Cumulative GPA: **3.86**

## PROFILE

I am a student, teaching assistant and collegiate wrestler at Washington and Lee University applying for a *summer internship in software development and data analytics*. My interests include machine learning, databases and data analytics.

## CODING LANGUAGES

- Python (highly proficient)
- SQL/SQLite (proficient)
- Java (experienced)
- Zsh/PowerShell/Bash (experienced)
- LaTeX (proficient)
- C, Swift, HTML, Haskell (lesser experience)

## EXTRACURRICULARS

### Wrestling

- 2017-2020 NYSPHSAA All-State
- 2020-2021 Academic All-American
- Currently competing for the Washington and Lee Collegiate team at 133lbs

### Pi Kappa Alpha

*Health and Safety Officer*

I plan and allocate amenities for social events as well as coordinate with the university and campus law enforcement to ensure good standing between the school and local chapter.

## REFERENCES

### Taha Khan, PhD

Security, Privacy and HCI  
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### Simon Levy, PhD

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## EDUCATION

### Hackley High School 2016–2020

- (2019) Received College credit for AP Computer Science
- (2020) Completed Post-AP course in mobile app development
- All High School courses taught in Java

### Washington and Lee University 2020–2024

- Programming Language Design: by drawing on the Church-Turing thesis, we juxtapose Object Oriented and Functional programming design patterns. I learned Haskell to better understand the equivalence between  $\lambda$ -calculable, recursive, and iterative models for defining algorithms
- Databases Systems: to develop a more rigorous understanding of relational databases, data security, and web application architecture I learned SQL, HTML, and Python Flask
- Software Development: Collaborating with a team of five students, I developed skills in code refactoring, unit testing, and remote collaboration. Our final project, roughly 2,000 lines of code, was Java program that parses user input as an algebraic expression on a triple of integers ranging from 0 to 255 to produce a complex pixelated image

## EXPERIENCE

### Teaching Assistant 2020-CURRENT

I teach CSCI-111, an introductory course in Python, and CSCI-112, an advanced course in Python with an emphasis on data structures. As an employee of the school, I am responsible for arriving on time for regularly scheduled office hours and for upholding the university's strict honor system, especially while there is no professor present. Moreover, this position necessitates the ability to explain higher level programming concepts including classes and data structures to individuals with no prior coding experience. Relevant data structures include static arrays, sets, stacks, queues, hash tables, trees and graphs.

### Summer Research Scholar 2022

Over the Summer of 2022, I reviewed and documented over 95 digital estate management services as well as prior academic works under Professor Taha Khan. I drafted a qualitative interview and mass-scale digital survey to gather primary data on various users of social media and cloud-based file management services. Using the survey, subjects are stratified based on factors such as age and technological proficiency. The qualitative interview allows us to categorize the features and characteristics of online services which determine user's attitudes towards them. Ultimately, this work will culminate in an IRB approved primary research publication with Professor Khan and I as co-authors.