

# Vikram Grover

Software Engineer · Computer Science Major · University of Waterloo

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## Education

**University of Waterloo** · Honours Bachelor of Computer Science

Sep. 2016 - June 2021

• Cumulative GPA: 3.47 | Major GPA: 3.69

## Skills

**Languages/Frameworks** Python · JavaScript/HTML/CSS · React · Ruby on Rails · C# · SQL

**Databases** MySQL · PostgreSQL

**Tools** Git · AWS (S3, Relational Database Service) · Postman

## Work Experience

**Redfin** · Incoming Software Engineer Intern, Home Valuation

June 2021 - Aug. 2021

• Building pricing and estimation tools for accurate valuation of homes, powering Redfin's iBuyer service using Java and React

**Scribd** · Software Engineer Intern, Payments

Jan. 2020 - Apr. 2020

- Reduced payment collection pipeline run time by 96%, by identifying and removing bottlenecks in database queries
- Built a logging system from scratch to track over 1 million user accounts, for early detection of account-related suspicious activity
- Improved user satisfaction by 12%, by finding and addressing flaws in the promo code processing workflow
- Tech Utilized: Ruby on Rails, MySQL

**Flipp** · Software Engineer Intern, FAdmin

May 2019 - Aug. 2019

- Maintained Flipp's monolith FAdmin web app that powers their platform, by processing over 2M products and 10k flyers per month
- Developed robust web scrapers for various retailer websites to scrape vital product information that would be consumed by millions of users
- Automated ingestion and sorting of digital flyer data from retailers for timely processing on FAdmin
- Tech Utilized: Ruby on Rails, MySQL, AWS S3

**NuSoft Solutions** · Software Engineer Intern

Sep. 2018 - Dec. 2018

- Independently built, tested and deployed features for a business card scanner app with 1000+ users on the Play/App store
- Improved processing time on high-resolution images by 48% by integrating image compression into the pipeline
- Significantly enhanced user experience by implementing authentication token renewal
- Tech Utilized: Ionic Framework, Microsoft Azure Cloud Platform, Angular, TypeScript, HTML/CSS

**Dye & Durham Corporation** · Software Engineer Intern

Jan. 2018 - Apr. 2018

- Fully developed, tested and shipped RESTful APIs that interacted with government systems to validate business registration data
- Tech Utilized: ASP.NET (C#), SQL Server, Postman, JavaScript, HTML/CSS

**BMO Financial Group** · Software Engineer Intern, Capital Markets

May 2017 - Aug. 2017

- Streamlined trader operations on internal web app by developing trader requested features to optimize usability
- Tech Utilized: ASP.NET (C#), SQL Server, Oracle Database, HTML/CSS

## Projects

**Pathfinding Algorithms Visualizer** [vikgrover.me/pathfinding-algorithms-visualizer](http://vikgrover.me/pathfinding-algorithms-visualizer)

Mar. 2021 - Apr. 2021

- Built a performant visualization tool for pathfinding algorithms such as Dijkstra's, A\* (A-star), Greedy Best-First Search and more
- Incorporated ability to draw/generate weighted obstacle mazes and patterns to allow for an interactive experience
- Tech Utilized: React, JavaScript, HTML/CSS

**FlappyBird AI** [github.com/VikramGrover/flappy-bird-ai](https://github.com/VikramGrover/flappy-bird-ai)

Dec. 2020

- Developed a playable FlappyBird game with similar-to-original physics and visuals
- Integrated a self-learning AI player that uses the NEAT evolutionary algorithm to incrementally generate neural networks with improved performance
- Tech Utilized: Python, PyGame, NEAT-Python Library

**Image Repository** [github.com/VikramGrover/image-repo](https://github.com/VikramGrover/image-repo)

Aug. 2020

- Designed and developed a web app to serve as an image gallery for cloud-stored images
- Leveraged Google Cloud Vision API's image labelling feature to support content-based and reverse image querying within the app
- Tech Utilized: Ruby on Rails, PostgreSQL, AWS S3 + Relational Database Service, Google Cloud Vision API, HTML/CSS

**“AutoPipe”: Flipp Hackathon Project**

July 2019

- Designed and developed a POC smart web scraper that aimed to reinforce Flipp's unreliable web scraping workflow
- Utilized IBM Watson Natural Language Understanding to train deep learning models to identify and scrape relevant content from web page
- Tech Utilized: Django (Python), IBM Watson Natural Language Understanding