

# 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: 80.92% | Major GPA: 84.29%

## 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 · Software Engineer Intern, Home Valuation**

**June 2021 - Aug. 2021**

- Incoming Summer Intern at Redfin's Home Valuation Team

**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, using Ruby on Rails and MySQL
- 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

**Flipp · Software Engineer Intern, FAdmin**

**May 2019 - Aug. 2019**

- Maintained Flipp's monolith FAdmin web app that powers Flipp's platform by processing over 2M products/month using Ruby on Rails and MySQL
- 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 using Ruby and 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 using Ionic Framework, Angular and TypeScript
- 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 using Azure Active Directory

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

**Jan. 2018 - Apr. 2018**

- Developed and shipped RESTful APIs that interact with government systems to validate business registration data using ASP.NET (C#) and SQL Server
- Utilized Postman for regression testing of the APIs

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

**May 2017 - Aug. 2017**

- Streamlined trader operations on internal web app by developing trader requested features using ASP.NET (C#), Oracle database and SQL Server

## Projects

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

**Mar. 2021 - Apr. 2021**

- Built a performant and clean visualization tool for pathfinding algorithms such as Dijkstra's, A\* (A-Star) and more using React
- Incorporated ability to draw/generate random obstacle mazes and patterns to allow for an interactive experience

**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 using Pygame and Python
- Integrated a self-learning AI player that uses an evolutionary algorithm to incrementally improve playing performance using 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 using Ruby on Rails and PostgreSQL
- Utilized AWS to store uploaded images on S3 and host a PostgreSQL database on Amazon RDS (Relational Database Service)
- Leveraged Google Cloud Vision API's image labelling feature to support content-based and reverse image querying on the app

**"AutoPipe" : Flipp Hackathon Project**

**July 2019**

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