

# ABHISHEK BABU

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## EXPERIENCE

### Software Engineer II

**Robinhood** 📍 Menlo Park, CA 📅 Aug 2022 – Present

- Building seamless products for moving money into, out of, and within Robinhood as part of the Money Movement team
- Built and launched Robinhood's instant bank deposit payment rail, Request for Payment, bringing in **>\$1B in deposits** since launch
- Re-architected a highly extensible and resilient payments state machine framework that is now used by multiple payment rails at Robinhood.
- Led and developed numerous engineering initiatives to reduce tech debt and improve efficiency across the entire payments stack:
- Sharded Robinhood's ACH bank transfer completion Airflow DAG that processes ~300k transfers from NACHA files everyday, reducing processing time from **~1h45m to ~35m** and ensuring that users' funds are settled before market open for trading.
- Deprecated and deleted remnants of Robinhood's legacy ACH bank transfer logic from a previously monolithic architecture and moved it to the newer internal payments service as part of a high-risk migration without causing a single outage.
- Improved the max P90 latency of one of the highest traffic endpoints in the Robinhood app that shows users' bank accounts from **~845ms to ~142ms** by rewriting the looping logic efficiently

### Lead Software Engineer

**Cledge (cledge.org)** 📍 Seattle, WA 📅 Jun 2021 – Oct 2021

- Built the user profiling functionality and a heuristic content recommendation algorithm using Flutter and a Cloud Firestore database on Firebase
- Developed database management consoles using Node.js and React.js, resulting in a **75% reduction in data entry time** for content developers
- Built a Python data pipeline using Apache Spark to populate an Azure Cognitive Search Index with data from the College Scorecard dataset
- Built an automated Python web scraper using Selenium to scrape non-copyrighted college campus images from Google Images
- Cledge was picked up by **Microsoft for Startups** in July 2021

### CodeLabs Intern

**CodeDay** 📍 Remote 📅 Jul 2020 – Aug 2020

- Built a resume classification platform to predict job categories of resumes using natural language processing techniques in Python
- Implemented a data processing pipeline in TensorFlow with Natural Language Toolkit (NLTK) to extract meaningful content from resume text
- Developed a multiclass convolutional neural network to classify processed resumes, achieving **87% test accuracy**

### Software Engineer Intern

**Tata Consultancy Services** 📍 Bellevue, WA 📅 Aug 2019 – Sep 2019

- Developed a .NET Core cross platform application with C# on a Raspberry Pi 4 to snapshot a conference room at regular intervals and gain insights into conference room usage throughout the work day
- Leveraged Azure Cognitive Services' Computer Vision API and Face API for human detection and facial recognition analysis on snapshots
- Integrated Azure Table Storage and Azure Blob Storage for storing snapshots and generating analysis results
- Implemented offline human detection with OpenCV Haar Cascade classifiers to optimize API calls, **reducing the application cost by 90%**

## EDUCATION

### M.S. in Computer Science

**University of Washington**

📅 Sep 2021 – Jun 2022 📍 Seattle, WA

- **GPA:** 3.84/4.00
- Combined B.S./M.S. Program in CSE
- **Capstone:** Data Science Capstone
- **Graduate Coursework:** Machine Learning, Machine Learning for Big Data, Deep Learning, Natural Language Processing, Artificial Intelligence, Computational Complexity

### B.S. in Computer Science

**University of Washington**

📅 Sep 2018 – Jun 2021 📍 Seattle, WA

- **GPA:** 3.97/4.00
- Data Science Option & Minor in Mathematics
- **Scholarships:**
  - Su Family Endowed Scholarship (2020-21)
  - Microsoft Endowed Scholarship (2019-20)
- **Undergraduate Coursework:** Systems Programming, Data Management, Data Visualization, Algorithms, Database Systems Internals, Computer Security, Computer Networks, Operating Systems, Computer Vision

## SKILLS

### Languages

Golang Python Java JavaScript  
TypeScript C# C++ C SQL

### Tools & Frameworks

PostgreSQL Django Apache Airflow  
Apache Kafka Docker Kubernetes  
Apache Spark Grafana LogScale  
Postman Flask

### Machine Learning & Data Visualization

PyTorch scikit-learn OpenCV  
TensorFlow NetworkX NLTK  
MatchIt D3.js Observable pandas  
statsmodels Jupyter Vega-Lite

### Cloud

AWS Microsoft Azure