

Ludwig von Schoenfeldt

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EDUCATION

BS Computer Engineering, University of California San Diego

Expected June 2026

- Activities and societies: Focusing on deep learning research and model compression, AMC, IEEE, E4E, KRG
- Relevant Coursework: Machine Learning, Deep Learning, Computer Vision, Linear Systems, Parallel Computing

EMPLOYMENT HISTORY

Software Engineering Intern, Apple

June 2025 — Sept 2025

- Developed Root Cause Analyzer, a full-stack AI app using internal ticketing APIs to identify root causes of software bugs, achieving **80% top-10 accuracy** on >10,000-change ticket collections, reducing manual triage from ~4 h to <30 min
- Leveraged **Swift** frameworks such as **SwiftUI**, **Combine**, **Foundation** & **SwiftData** for full end to end MacOS application
- Completed the full product lifecycle from research and design through development, QA, and internal deployment
- Improved accuracy **by 15%** through adding PR code analysis for top 10 - 50 potential root causes using **Stash API**
- Providing user with **Code Fix Analysis** which automatically suggests fixing strategy with code fix for approved root cause
- Integrated local and API based caching, storing earlier analysis directly into API for efficient & fast access for everyone
- Created custom dashboard to count and display different types of software bugs and number of changes per Communication App over custom time period showing trends to improve resource allocation in QE using **React**, **PostgreSQL** & **Flask**
- Deployed custom scripts using **Kubernetes** that processes build info from internal build tracking APIs for dashboard

Undergraduate Student Researcher, [Engineers for Exploration](#) & KRG @UC San Diego

Oct 2023 — Present

- **Project Lead** managing and training a team of **15** undergraduate students for various tasks (including ML, SE, DS)
- Using **CNNs** & **Transformers** to classify bird calls in the Amazon rainforest to track climate change in collab. with [SDZWA](#)
- Creating **PyTorch**, **Rust** & **ONNX** solution to achieve **> 10x speed up** on inference and training times for larger models
- Developing Desktop app using **Electron.js** which encapsulates labeling, running inference and storing data using **MySQL**
- Working on low power **microcontrollers** to develop neck collars to monitor pandas' behaviors using deep learning @[KRG](#)
- Leading a team of 10 students working on a **tinyML** solution for real-time animal sound inference on **STM32**, leveraging **MCUNET**, **TF micro** and **STM32 CubeXAI** for CNN distillation, pruning & quantizing achieving 95% accuracy [[Website](#)]
- Published a research paper to the NeurIPS climate change workshop - presented at conference [[Report](#)][[Paper](#)][[Article](#)]

Research Assistant, Rady School of Management @UC San Diego

Aug 2023 — June 2024

- Led technical development of sleep study to track relationship between rewards and sleep time with over 30,000 participants across over 100 US college campuses through cross-platform app development using frameworks like **React** and **Flutter**
- Integrated external APIs, including **Fitbit's** services, **GCC** & **Firebase**, for seamless sleep data retrieval and analysis
- Conducted **advanced NLP research** for a national research project about PPP with several terabytes of Census data using **Numpy**, **Pandas**, **TensorFlow**, **Pytorch** and **Scikit** on the Narrows Cluster at San Diego Supercomputer Center ([SDSC](#))

Software Engineering Intern, doubleSlash Net-Business GmbH, Munich, Germany

Jul 2020 — Dec 2020

- Led the development of a backend project for internal **IoT** devices leveraging **.NET**, **Microsoft Azure**, **C#** and **FFmpeg** utilizing serverless functions to retrieve and process images to create time lapse videos synchronized daily automatically
- Created custom data pipelines using **Azure DevOps** for retrieving and processing images and metadata from RestAPI
- Utilized **Azure blob storage** and **durable functions** to create full stack solution for several internal tools and processes

Head of Software Development, TwoTronic GmbH, Meitingen, Germany

Feb 2020 — Dec 2020

- Led a team of 5 engineers in software development for the vehicle scanner, an advanced multi camera system that automatically captures and processes images of vehicles to detect and classify damages all around the vehicle [[Website](#)]
- Directed the development of a custom **Computer Vision** damage detection algorithm using **Pytorch**, **TF** and **OpenCV** by modifying and training the existing **CNN (VGG-19 model)**, on our custom-built supercomputer with over 50TB of training data from vehicle scanners at **Amazon** warehouses and **Mercedes Benz** achieving over 90% accuracy [[Github](#)]
- Developed a full-stack **iOS app** using **Flutter** for the **Porsche** internal App Store that helps locate previously scanned vehicles in their system under the mentorship of Porsche's Head of Logistics and Central Services, Sascha Drechsel [[Letter](#)]
- Spearheaded integration with Mercedes-Benz's internal network, architecting **low-latency REST APIs** and streaming pipelines that ingest terabyte-scale telemetry from 20+ vehicle scanners across Europe with over 2TB daily data traffic

PROJECTS

PaintCalcArt [App Store](#)

Los Angeles, CA

Full-Stack App developed in **Flutter** with > 15,000 downloads and > 500 daily active users that can accurately detect and calculate the the amount of paint needed for each color in uploaded designs for bigger mural projects through custom **Computer Vision ML algorithms** using **TensorFlow**, **Scikit** & **Pytorch** integrated with **Firebase Auth**, **Firestore**, **BigQuery** & **GCC**

Growth Planner [App Store](#)

Los Angeles, CA

Full-Stack App with > 10,000 downloads and > 300 daily active users built with **Flutter** and designed with **SOLID** design principles in test-driven development providing a custom planner focused on being more mindful throughout your day

TECHNICAL SKILLS

Languages: Python | C++ | Objective -C | C | Swift | SQL | Java | Golang | Dart | Assembly | C# | Kotlin | CUDA & OpenCL | Rust

Software & Tools: OpenCV | AJAX | Pytorch | Microsoft Azure | CI/CD | Docker | Scikit | AWS | DevOps | Git | SwiftUI | Numpy | TF