

Alexei Solonari

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EDUCATION

- *University of Central Florida* — Orlando, FL | 2022 - Expected 2027 (Current)
 - Bachelor's Degree in Computer Engineering, GPA: 3.53

EXPERIENCE

Configurable Software Analysis Research Assistant

- *University of Central Florida (APPLeSEEd Lab, Dr. Gazzillo)* | Jan 2024 - Present (NSF REU from May 2024)
 - Develop/test program analysis tools & apply fuzzers to find bugs in low-level systems incl. Linux kernel
 - Identify underlying factors of issues found with customized kernel configuration files, filing and investigating bug reports when applicable
 - Gained proficiency in Linux filesystems and its VFS abstraction, preemptive multitasking functions including function locks & sleep states. Utilized advanced debugging tools incl. but not lim. to KASAN address sanitizer, KGDB, QEMU virtualizer, ftrace function tracer to address niche, system-level bugs

Server Assistant/Backwaiter

- *Fleming's Prime Steakhouse & Wine Bar, Winter Park* | Mar 2023 - Jan 2024 (Part-Time)
 - Communicated with servers on their needs and assisted them with resetting tables and creating inviting areas quickly & efficiently
 - Delivered world-class experiences to guests in high-stakes environment with extraordinary bread service & top-tier table service, ensuring they left with expectations exceeded
 - Coordinated with BOH on preparing food and drinks for correct table & exact guest every time
 - Ultimately contributed to location's most successful Thanksgiving and holiday season in years

Additional Experience

- *DOMU Chibi Ramen*: Part-Time Front of House Associate (Aug-Mar 2023)
- *WonderWorks Orlando*: Seasonal Food & Bevg. Team Member (Jun-Aug 2022)
- *Coalition for the Homeless of Central Florida*: Kitchen Volunteer (Jun-Aug 2021)

RECENT PROJECTS

Grower — Budgeting Software

- Technologies: Tkinter, Python, Alpha Vantage | *Knight Hacks 2023* Group Project
 - GUI budgeting program: features transaction importing, categorical organization & data presentation
 - Calculates amount for user to round up into savings/stocks from transactions
 - Displays list of most-traded stocks that user can click into for graph & info

Attractulator — ML Facial Expression Detector

- Technologies: TensorFlow, Python | *ShellHacks 2023* Group Project
 - CLI program that takes in an image of a face & auto-crops, adds grayscale internally
 - Compares submitted image to model we trained using on-device ML
 - Outputs probability of unusual facial expression occurring within image

EXTRACURRICULAR

- Active IEEE (Institute of Electrical and Electronics Engineers) UCF member
- Member of UCF EXCEL program, a math learning community of students & professors

SKILLS

- C, Java, Python, Git, GitHub, GitLab, Mercurial, TensorFlow, Jupyter, API, Data Structures & Algorithms, object-oriented programming, software development, hardware engineering, firmware, low-level software engineering, front-end, back-end, full-stack, Windows, Linux, macOS, Bash, Z Shell, command line, terminal, Xcode, Visual Studio Code, IntelliJ IDEA, computer science, electrical engineering, linear circuits, statistics, real-world experience, verbal & written communication, soft skills, customer service, collaboration skills