

# ANDRIY NOVKOV

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## EXPERIENCE

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### Aethra Labs (YC W26)

*Cofounder & CTO*

San Francisco & Berkeley, CA

*July 2025 – December 2025*

- Architected a system-level AI agent monitoring platform using eBPF (libbpf) to capture kernel-level traces (file I/O, network, process trees) with < 3% CPU overhead, providing auditability independent of agent state.
- Built a high-throughput telemetry ingestion and visualization stack (Python, TypeScript, Docker) that transformed raw system events into forensic-style replays for investigation of complex agent behavior.
- Engineered AI-based trajectory monitors that automatically flagged suspicious or misaligned behavior and integrated them into real-time analysis pipelines for continuous safety evaluation.
- Deployed privileged observability daemons inside Redwood Research evaluation environments, attaching to target PIDs to capture ground-truth runtime behavior for safety-critical model testing.
- Executed a 24-hour rapid deployment of red-team infrastructure for xAI Grok evaluations, utilizing a LiteLLM proxy and OpenWebUI to enable structured interaction and centralized logging.
- Raised \$700,000 in seed funding from Y Combinator and prominent angels, including Geoff Ralston.

### The Center for AI Safety (CAIS)

*Lead Infrastructure Engineer*

*February 2023 – July 2025*

- Owned infrastructure for a GPU cluster for ML research (OCI, Slurm) with 256 GPUs and a distributed parallel filesystem (WekaFS), supporting 125+ papers and 16,000+ citations; \$3.5M+ annual budget.
- Led deployment of converged 200TB WekaFS, reducing storage cost/GB by 90% for \$900k+ in annual cost savings.
- Mitigated EOL risks and enabled modern containerization and WekaFS support by executing a full cluster OS migration to Ubuntu 22.04, rewriting Ansible automation and migrating 200TB and 150M+ files.

### Bidtellect (acquired by Simplifi)

*Platform Software Engineer*

*June 2020 – February 2023*

- Powered a platform processing 6B+ daily auction requests by building, debugging, and maintaining RESTful APIs, ETL pipelines, and SQL/NoSQL data systems.
- Audited and optimized 700+ SQL queries, removed dead queries, and cut user login latency by 50% (6s to 3s) by improving a cache-loading query.
- Supported team execution as Scrum Lead by scheduling ceremonies, unblocking engineers, and tracking sprint delivery.

### Knoebel Institute for Healthy Aging

*Research Assistant / Electrical Engineer*

*September 2018 – June 2020*

- Designed and built an advanced neural recording apparatus (tetrode drive), improving reliability and performance compared to conventional electrodes.
- Tested wireless neural recording devices and recorded rodent motor cortex activity to study the relationship between neural signals and motor movement for movement-prediction modeling.
- Secured \$5,500 in research grants.

## TECHNICAL SKILLS

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- Systems & Security: Linux Kernel, eBPF (libbpf), System Instrumentation, Tamper-Resistant Telemetry, Perf Profiling
- Infrastructure & DevOps: Slurm, Ansible, Terraform, Docker, Kubernetes, Nix, WekaFS, Prometheus, VictoriaMetrics
- Cloud & Data: Oracle Cloud (OCI), AWS, GCP, PostgreSQL, MySQL, MS SQL Server, NoSQL, High-Throughput ETL
- Languages: Python, TypeScript/JavaScript, Bash, C/C++, C#, Java

## EDUCATION

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### University of Denver

Denver, CO

- Bachelor of Science in Computer Engineering