PETER DRAGOS

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PROFESSIONAL SUMMARY

Software engineer with knowledge of formal methods, type-driven development, and complex system design. Experienced in leading remote teams through complete product lifecycles with a focus on security, reliability, and architectural integrity. Strong background in mathematics and theoretical computer science with proven ability to tackle complex technical challenges.

WORK EXPERIENCE

MLabs   October 2021 – October 2024
Functional Programming Engineer, Project Manager, Communications   *Remote, Contract*

- **System Development**: Led remote teams building robust, type-safe applications in Haskell and PureScript for blockchain environments requiring high reliability
- **Architecture & Testing**: Implemented comprehensive testing strategies including unit tests, property-based testing, and integration testing for mission-critical applications
- **Security Focus**: Developed blockchain applications requiring robust security measures and cryptographic integrity
- **Technical Leadership**: Managed formal methods engineers performing verification activities using the Lean proof assistant, model checking, and solvers for critical system components
- **Documentation & Knowledge Sharing**: Spearheaded company-wide knowledge-sharing and documentation efforts using Notion and Github Markdown
- **Team Collaboration**: Facilitated information transfer between users, management, and development staff in a globally distributed team environment
- Led public peer reading groups on introductory logic, dependent type theory, and category theory to prepare colleagues for applications in formal methods
- Performed technical interviews for Haskell and formal methods engineer roles

Arctan, Inc.   January 2020 - January 2021
Technical Staff   *Alexandria, Virginia (Remote)*

- Managed projects requiring algorithmic design and technical architecture for secure applications
- Implemented systems adhering to information security compliance requirements
- Designed game-theoretic algorithms for complex decision-making systems

University of Rochester, Medical Center   May 2019 - May 2020
Software Developer   *Rochester, NY*

- Developed technical infrastructure for continuous patient monitoring systems
- Built backend services using NGINX, Postgres, Docker, Flask (Python), and Ansible
- Implemented secure data handling protocols for sensitive medical information

Audio Visual (Various Freelance/In-house)   November 2015 - February 2022
Contractor   *New York State*

- *Selected Affiliations*: Judson Memorial Church; IATSE Local 10; IATSE Local 25; Kodak Center; Music First Productions; Buffalo State Performing Arts Center; Burchfield Penney Performing Arts Center

EDUCATION

University of Rochester
Mathematics BSc

Graduated May 2020
3.9/4.0 GPA

- Completed Honors courses in calculus, real analysis, topology, and algebra
- Independent studies in coding theory and game theory
- Treasurer of undergraduate mathematics students' organization

TECHNICAL SKILLS

Programming & Development

- **Languages**: Haskell, PureScript, Python, C, SQL, HTML/CSS, LaTeX, jinja2, yaml, JSON, Tailwind
- **Environment & Build**: Nix, NixOS, Docker
- **Testing**: Unit testing, property-based testing, integration testing, model checking
- **Paradigms**: Type-driven development, functional programming, monadic design

Systems & Infrastructure

- **Containerization & Deployment**: Docker, Nix/NixOS, Terraform
- **DevOps**: Linux, Git, Bash, emacs, vim, SSH, GPG, CI/CD workflows
- **Security**: Information security compliance, cryptographic protocols

Architecture & Design

- **Formal Methods**: Lean proof assistant, dependent type theory, model checking, verification

Audio-Visual Technologies

- Black Magic switchers, QSC, Yamaha, Presonus, Focusrite, ETC, Shure, basic rigging, stage management, house management, basic electronics repair, gimp, Inkscape, Bitwig, Renoise, CAD

CERTIFICATIONS AND LICENSES

Red Hat Certified Systems Administrator (RHEL 8)

January 2020 (Expired)

- Certification ID: 200-015-576

Amateur Radio License, Technician Class

- Callsign: KD2UQI

CONTINUING EDUCATION & COMMUNITY

- Led reading groups in introductory formal logic and type theory (2024)
- Led reading groups in introductory applied category theory (2022)
- Attended Zurihac (2022, 2024)
- NYC Category Theory Meetup Group
- 2600 Rochester (information security meetup group)
- Interlock Rochester (hackerspace)
- BSides Rochester (2019)
- Rochester Makerspace
- The Foundry (makerspace) woodshop safety supervisor