# DIV SLOMIN

dgslomin@alumni.princeton.edu
978-771-4289

## CURRENTLY SEEKING

I am currently seeking opportunities as a software engineer in the Boston metropolitan area (in-person, remote, or hybrid).

## EDUCATION

BSE in Computer Science Engineering from Princeton University, 1998.

## PROFICIENCY

Languages: Python, JavaScript/TypeScript, Java, C/C++, Scala, C#, Shell. Operating Systems: Unix/Linux, Windows, MacOS, Android. Technologies: generative AI/LLM integration; full stack web programming (ReactJS, FluentUI, MUI, NodeJS); Azure and AWS cloud computing (Azure ML, AKS, Azure Data Explorer/Kusto, CosmosDB, EC2, S3, EMR, Redshift, RDS); PII compliant secure data handling; text processing (indexing, auto-categorization, tokenization, data clustering, character normalization, regular expressions, parsers, Unicode/encodings, internationalization, localization); databases (SQL, PostgreSQL, MySQL, SQLite, NoSQL); distributed systems (microservices, Kubernetes, load balancing, failover, mirroring, data segmenting, message queues); embedded programming (Raspberry Pi, Android); desktop GUI programming (Qt, Wx, GTK+); multimedia programming (MIDI, audio synthesis, image recognition); AdaptiveCards, XML processing, multithreading, object orientation, sockets, porting and platform-neutral programming; .NET and JNI; Azure DevOps, Git, Splunk. Project management: Agile, Scrum, Kanban. Many additional legacy tools and technologies.

## EXPERIENCE

**SOFTWARE ENGINEER, MICROSOFT** - 2019 to 2024
Work on Semantic Machines and Microsoft 365 Copilot products.

Contributing architect and developer of the quality evaluation system for *Microsoft 365 Copilot,* the generative AI integration into enterprise Office products. This uses both traditional statistical metrics and LLM-based metrics to check the accuracy, appropriateness, grounding, and safety of user-facing results. Architected support for claim-wise metric computation, content selection quality, and tool entity precision recall, as well as metrics dashboards.

Contributing architect and developer of various aspects of the *Harbor* machine learning conversational AI system. Architect and product lead for the *Periscope* interactive error review system for data specialists refining models for different domains. Integrator and data specialist liaison for the *Semantic Machines Productivity Assistant* (calendaring) domain. Contributing developer of the *Aqueduct* model training workflow and data management system. Architected the dialogue recipe and recipe template system in the Harbor SDK used for training models, and test harness systems for quality-checking them. Integrated language server protocol support for the *Express++* language (which allows Harbor to invoke domain-specific actions) into Visual Studio Code. Developed metrics for data specialist workflow performance and error clustering.

Scrum master and Kanban facilitator. Teacher for multiple project-based programming bootcamps for high school students.

**SOFTWARE ENGINEER, HERE TECHNOLOGIES** - 2016 to 2019
Work on Here (Navteq) internal services.

Contributing architect and developer of a new accounting system for all billable services at Here in order to support the new *Open Location Platform* product. This was a cloud-based big data project in Java and SQL, using Apache Kafka and Flink with Amazon EMR and Redshift.

Contributing maintainer of Here's legacy accounting system based on Splunk and Amazon RDS.

**SOFTWARE ENGINEER, AMAZON** - 2013 to 2016
Work on Audible products and services.

Contributing architect and developer of *Amazon English*, Android-based educational software that helps native Japanese speakers improve their reading and listening comprehension of English.

Contributing developer of audiobook playback and *Immersion Reading* (synchronized audiobook and e-book) software for Android, Kindle Fire tablets, and the Amazon Fire Phone, including Java-based user interface and networking code, and C++-based audio file and digital rights management code.

Helped build several teams at Amazon by running numerous technical interviews.

**SOFTWARE ENGINEER AND SOFTWARE DEVELOPMENT MANAGER, SAS INSTITUTE** - 2003 to 2013
Work on Teragram, PicoSearch, and SAS text analytics products and services.

Development manager for information retrieval technologies including search, crawling, and document normalization. Led a cross-site team of multiple developers and quality assurance engineers through several product releases.

System architect and principle developer of *Information Retrieval Studio,* an extensible search product including crawling, document manipulation, and indexing. Architect and developer of *Markup Matcher,* a document normalization tool for interactively building and testing extended XPath expressions against sample XML and HTML documents, then publishing the resulting model so that it can be applied to new documents in realtime. Contributing architect, integrator, and crawler team lead for the SAS social media analytics service. Principal developer for integrating Teragram's existing library code into the codebase of the new corporate parent, SAS. Contributing system architect for SAS's next generation unified text analytics software suite.

Leader of an international development team for the *MyGADs* knowledge repository portal service, supporting a natural language interface for answering questions, teaching new facts, and issuing directives; account management; a custom wiki system; document auto-categorization and indexing; a hosted programming language with embedded UIs for extension applications; web, mobile app, and chatbot interfaces; a distributed architecture supporting load balancing, mirroring, data segmentation, and backups; web-based administration; and query statistics analysis. Responsibilities included coordination of developers, testers, documenters, and IT administrators; system, component, protocol, and database architecting; component implementation; and sales integration.

System architect and principal developer of the *PicoSearch Platinum* hosted search service supporting a modular crawler, customer-specific document processing and query interfaces, and integration of Teragram technologies.

Contributing architect and developer of other Teragram technologies including its search engine, categorization, document text extraction, corpus-based query suggestion, and term clustering systems, as well as *Direct Answers,* a natural language question answering service based on data mining of public repositories of general knowledge. Sales integrator for high-profile customers including AOL, ABC News, Archivas, the New York Times, the Washington Post, CNN, the Associated Press, EBSCO, the US Department of Education, and the Spanish Civil Guard.

**SOFTWARE ENGINEER, ALTAVISTA** - 1998 to 2003
Work on AltaVista Enterprise Search.

Architect, lead developer, and team lead for a next-generation search query infrastructure and front-end interface. Contributing maintainer of the previous front-end query system. Architect and developer of query syntax parsers and international character encoding conversion and normalization libraries. Resident Unicode expert and localization data maintainer. Contributing developer of core crawling and indexing algorithms; customer-facing technical liaison for sales and support; and instructor of internal and customer-facing training courses.

**SOFTWARE ENGINEER, PRINCETON UNIVERSITY COGNITIVE SCIENCE LABORATORY** - 1997 to 1998
Work on the WordNet hyper-thesaurus.

Design and implementation of multi-platform GUI and web interfaces; programming of backend library routines; porting to X11, Windows, and Mac.

## OUTSIDE INTERESTS

Volunteering as a high school computer science teacher; homemade and open source music software and hardware; music composition and performance; community theater; and volunteering at an animal shelter.