

## Education

[Software Maestro, Ministry of Science, ICT and Future Planning, Korea](#) 2017.08 ~ 12  
[swmaestro.kr](http://swmaestro.kr) Government selected, sponsored SW Maestro development program  
Full-stack(django,d3.js) Unity-Android APM Web-app Solution "Mononity([mononity.com](http://mononity.com))"  
development([github.com/Mononity](https://github.com/Mononity)). R&D on Unity-Android-MonoFramework with studying  
scalable OLAP system for solving Unity-performance issues on numerous Android models.

[Visiting Scholar, Purdue University, West Lafayette, IN, USA](#) 2016.09 ~ 12  
International Scholar in IITP Capstone 7 Program (Ministry of Science sponsored)  
Center for Robotic Innovation, Commercialization and Education (RICE), Korean Software  
Square, Purdue University. Audited "Data mining & Machine learning" and "Introduction to  
Neural Networks" for preventing Drone attacks by 'Real-time UAV Sound Detection and  
Analysis' IEEE Sensors Applications Symposium accepted paper with Machine Learning  
Framework as a Team Leader/Engineer/Founder([github.com/drexly/teamTAKEDOWN](https://github.com/drexly/teamTAKEDOWN)).

[Dongguk University, Seoul, South Korea](#) 2012.03 ~ 2018.08  
Pursuing Bachelor of Science in Computer Science and Engineering (Major)  
Expected 08.2018, A semester with one academic point left for graduation. Achieved **6 on-campus prizes** regarding major. **Applied 5 patents** including **1 program copyright registration** with winning **2 international patent(utilizing chatbots) prizes** in  
"Taipei international invention show & technomart 2017". Was elected as a school  
algorithm study association leader in freshman, selected TA in sophomore, and selected 3  
times as a school representing developer for off-campus developing contests. From junior  
to senior, got scholarship of "**Korea Telecommunication(KT)'s Creative Innovation  
Leaders & Future Creating Talented Scholars**", and got full-fundings of international  
capstone program, IEEE paper publication and its international symposium presentation.

[Daeil Foreign Language High School, Seoul, South Korea](#) 2007.03 ~ 2010.02  
Department of French Studies  
Diplôme d'études en langue française (DELFI) B1, Alliance française, 2008.09.

## Work Experience

[NVIDIA Inception Program Partner AI Startup CYA.AI Representative](#) 2017.09 ~  
By **winning in NVIDIA-SKT AI Hackathon 2017**, NVIDIA Inception Program selected  
my team as a Partner AI Startup. Successfully developed and served 'Real-time Embedded  
Deep-Learning Autonomous Lane Change System' solution for "LS Automotive" Corp.  
([github.com/drexly/DeepDrive](https://github.com/drexly/DeepDrive)). Also have developed B2B AI solutions ([www.cya.ai](http://www.cya.ai)).

[ETRI Research Trainee, Busan, South Korea](#) 2016.06 ~ 08  
Hyper-connected media service research room, Department of smart platform  
research, Hyper-connected communication research laboratory, Electronics and  
Telecommunications Research Institute of Korea.  
R&D on Computer Vision and Digital Image Processing skills for Interactive Media Service  
Platform that can interact with HCI-i/o devices via real-time networks in interactive cinema.

[ROK Army as Signaller, Computer Security Manager, Sergeant](#) 2014.04 ~ 2016.01

Fully served and discharged from Military duty of Republic of Korea Army, South Korea.

Hacked (as a Whitehat) whole ROK web server, found various vulnerabilities of security softwares. Got 2<sup>nd</sup> prize of "Military Defense Information Security Competition held by DoD & Defense Security Command" granted by President of Korea Internet & Security Agency.

Teaching Assistant, Dongguk Institute of Science Education for the gifted 2013.03 ~ 07  
Data structures & Algorithms TA. Only one sophomore among whole institute assistants.

Freelancer, Python based (PyQt, Django, Numpy), South Korea, USA 2016 ~ 2017  
Built Algorithm(ESC Enterprise Group LLC, Indiana), Windows App(Myongin Auction, Seoul) and Web app(Young J Corp, Seoul) from the scratch, for practical business.

## Papers & Presentations

"AI: Korean-NLP Sentiment Dictionary reflecting review-data reliability" Korea Software Conference 2017. Second Author Poster-presentation, Busan, South Korea 2017.12  
Devised algorithms processing web-portal crawled movie review data(Elasticsearch) into users' reliability-evaluated Korean sentiment SearchEngine. Deployed collective-intelligence, OpenAPI, TensorFlow AI chat with user-sentiment analysis and movie recommendation on realtime web([github.com/drexly/openhgsenti](https://github.com/drexly/openhgsenti)).

NVIDIA Deep Learning Day 2017 AI Startup [nvidia.com/ko-kr/deep-learning-day/agenda/](https://nvidia.com/ko-kr/deep-learning-day/agenda/)  
Proposal requested from Samsung & Hyundai([github.com/drexly/chatbotAIresume](https://github.com/drexly/chatbotAIresume)). 10/31

"Real-time UAV Sound Detection and Analysis" IEEE Sensors Applications Symposium . First Author Oral-presentation, New Jersey, USA 2017.03  
Devised and developed 1-Server:6-Clients network interacting UAV air defense GUI system framework by Python which can locate the UAV's appearance by analyzing and Machine-Learning its features through real-time transformed data inputs of UAV frequency from motor sounds.([youtu.be/rPEdQrGMHs](https://youtu.be/rPEdQrGMHs) , [ieeexplore.ieee.org/document/7894058/](http://ieeexplore.ieee.org/document/7894058/))

## Other Achievements

VIP briefing in Engineering Education Festa ([github.com/drexly/DeepDrive](https://github.com/drexly/DeepDrive)) 2017.11  
Marquis Who's Who Nomination ([github.com/drexly/teamTAKEDOWN](https://github.com/drexly/teamTAKEDOWN)) 2017.08  
Won IoT Energy Hackathon, Invited to Naver Corp. ([github.com/drexly/enghkt](https://github.com/drexly/enghkt)) 2017.04  
Google Developer Group Korea Campus Firebase Hackathon Popularity Award 2017.02  
(Leader. [github.com/drexly/HotPle](https://github.com/drexly/HotPle) , [github.com/GDGKC-FirebaseHackathon/SeoulHotPle](https://github.com/GDGKC-FirebaseHackathon/SeoulHotPle))  
Software-centered university association OpenSource Hackathon 3<sup>rd</sup> prize 2017.02  
(Represented the school, Leader. [github.com/seoulhot](https://github.com/seoulhot) , [sigoss.github.io/hackathon2017/](https://sigoss.github.io/hackathon2017/))  
Grand Prize in Contest of school entrepreneurship capstone design 2016.06  
(GAE Hybrid App. [github.com/drexly/tonginBlobStore](https://github.com/drexly/tonginBlobStore) , [github.com/drexly/RankingReview](https://github.com/drexly/RankingReview))

## Development Skills

Deployment	Google App Engine(django appspot),Firebase(javascript/android), AWS
Frameworks	PyQt, Django, Flask, OpenCV, Android, Arduino, RaspberryPi, JetsonTX2
Languages	Python, C/C++/C#, Java(Oracle Certified Professional), JavaScript,GO
Databases	MySQL,Sqlite, MongoDB,Google Cloud Datastore(Blobstore API)
Data Science	ElasticSearch(ELK stack), TensorFlow, Caffe2, Numpy, Scikit-learn

## • 경력:

- 現 NVIDIA Inception Program Partner AI Startup Representative (2017 SKT-NVIDIA AI Hackathon 수상 및 자격 획득)
- 現 인공지능 창업동아리 CYA.AI 대표 - 2017 교육부 대학 창업 유망팀 300 선정, SK청년비상(飛上)창업경진대회 결선 진출
- 現 동국대학교 컴퓨터공학과 4학년(정규 7/8학기) 재학 (<https://scholar.google.com/citations?user=1-Uc0v4AAAAJ>)
- 대한민국 과학기술정보통신부 소프트웨어 마에스트로 8기 연수생 (<https://github.com/drexly/SWmaestroMononity>)
- 한국전자통신연구원(ETRI) 초연결통신연구소 스마트플랫폼 연구부 초연결미디어서비스 연구실 연구연수생 (<http://news.naver.com/main/read.nhn?mode=LSD&mid=sec&sid1=001&oid=003&aid=0007452257> , ComputerVision, HCI)
- 동국대학교 과학영재교육원 자료구조 및 알고리즘 과목 조교(2학년 1학기 ~ 여름방학 학부생조교, C/C++)

## • 컴퓨터공학 논문(인공지능 분야)

- Real-time UAV sound detection and analysis system - 실시간 드론 주파수 기계학습 분류 프레임워크 개발. 제 1 주 저자 및 2017 IEEE Sensors Application Symposium, NJ, USA, Oral presentation.
- <http://ieeexplore.ieee.org/document/7894058> , <https://github.com/drexly/teamTAKEDOWN>
- Deep Neural Network Based Real-time UAV Detection and Analysis System by Sound - 딥러닝(텐서플로우) 기반 실시간 무인 항공기 검출 및 분류 멀티 에이전트 시스템 개발. SCI 저널인 TIM(IEEE Transactions on Instrumentation & Measurement) 에 IEEE SAS 2017 Special Issue 자격으로 제 1 주 저자 투고 예정.

## • 개발 수임

- 2017 CYA.AI - 차선 변경가능 여부 판독 AI(Computer Vision)+IoT(Ultrasonic Sensing) "LS Automotive" 기업 문제 해결 프로젝트 수주 (<https://github.com/drexly/DeepDrive> , <http://www.honam.co.kr/read.php3?aid=1510239600539545228>)
- 2017 제15회 대한민국 임베디드SW경진대회 인텔코리아 부문 결선(COEX 부스전시), 제11회 공개SW개발자대회 최종 결선 진출 (<https://github.com/drexly/misae.ai> , <https://github.com/drexly/openhg senti>)
- 2017 Freelancing: (주)영제이물산 - 역경매 시스템 (Web - Python Django)
- 2017 Freelancing: (주)명인옥션 - 예술품 경매 시스템 (Windows Application - Python PyQt)
- 2016 Freelancing: ESC Enterprise Group LLC, Indiana, USA - 알고리즘 제작 (Big Data Processing - Python NumPy)

## • 그 외 개발 & 컴퓨터공학 전공 관련 경력

### • 1학년

- 공과대 영어에세이대회 공과대학장상
- 컴퓨터공학과 학술동아리 Dongguk Algorithm Study Association 회장 (C/C++, Project Euler, Google CodeJam)

### • 육군

- 국방부·기무사령부 주최 국방 정보보호 암호컨퍼런스 보안경진대회 KISA원장상  
(국방통합데이터센터-육군본부주전산통합시스템 쏜 서버 화이트해킹 및 각종 취약점 보고: Web,Server,Middleware,WindowApps)
- 국방부·미래창조과학부 주최 군장병공개SW역량강화교육APP개발캠프과정 수료 (Android)

### • 3학년

- 교내 창업 캡스톤 디자인 경진대회 대상 (특허출원번호:10-2016-0080608 명칭:지역 정보 제공을 위한 시스템. 총장상)
- 미래창조과학부 정보통신기술진흥센터 선발, International Scholar in IITP Capstone 7 Program, Purdue University Visiting Scholar(Introduction to Neural Networks, Data Mining & Machine Learning, <https://github.com/drexly/teamTAKEDOWN>)

### • 現 4학년

- 2017.01.20. 동국대학교 창의 융합 콘텐츠 C3대회 수상(Android Application - <https://github.com/drexly/tonginBlobStore>)
- 2017.02.04. 소프트웨어 중심대학 연합 오픈소스 해커톤 학교 대표 및 수상(Team Leader - <https://github.com/seoulhot>)
- 2017.02.17. 동국대학교 Unity 교육과정 수료
- 2017.02.18. Google Developer Group Korea Campus Firebase Hackathon 수상(Leader - <https://github.com/drexly/HotPle>)
- 2017.03.14. (NJ,USA) IEEE SAS 논문 제1저자 Full Funded Oral Presentation (<https://github.com/drexly/teamTAKEDOWN>)
- 2017.04.08. 서울대 전력연구소 주최 산업통상자원부, 네이버 후원 2017 IoT 에너지해커톤 우승(Dev. Leader: IoT, Full-stack Web) (네이버상 수상 및 2017.05.08. 네이버 본사 초청 견학 <https://github.com/drexly/enghkt>)
- 2017.05.25.~05.26 Naver Campus Hackday personization-빅데이터 처리 프로젝트 선발 및 개발(PySpark, Django MiddleServer)
- 2017.05.26. 제3회 인천광역시 공공데이터 활용 아이디어 기획 공모전 인천광역시장상(인천핫플 <https://github.com/drexly/HotPle>)
- 2017 KT 창의혁신리더 미래창조인재장학생 선발
- 2017.06.23. 동국대학교 캡스톤 디자인 Value-up 프로그램 선정 및 2017.09.15. Value-up 프로젝트 총장상(AI 객체분석 CCTV)
- 2017.06.30. 동국대학교 상반기 SK 청년비상 창업경진대회 우수상 및 전국대회 최종결선 진출 (LoRa-AIoT 기기 제어 챗봇)
- 2017.07.04. 동국대학교 창의문제해결 프로젝트 선발 및 2017.12.20 최우수상 (한국어 감성분석 인공지능 챗봇)
- 2017.08.06. 동국대학교 글로벌 창업 역량강화 콜럼버스 프로그램 선발. 10월 특허 2건 타이베이국제발명박람회 한국 부스 출품, 수상
- 2017.08.08. Marquis Who's Who Nomination (<https://github.com/drexly/teamTAKEDOWN>)
- 2017.08.27. SKT-NVIDIA 주최 AI 해커톤 우승(팀명: 김주현과 친구들 <http://blogs.nvidia.co.kr/2017/08/28/3rd-hack-a-thon/>)
- 2017.10.30. 제주 글로벌 해커톤 학교 대표 선발 (Team Leader Full-stack Web : <https://github.com/jejuhack9>)
- 2017.10.31. NVIDIA DeepLearning Day(코엑스인터컨티넨탈)"CYA.AI" 인공지능 챗봇 사업발표(삼성전자,현대오토에버 제안서요청)
- 2017.11.08. 산업자원통상부 공학페스티벌 부스(김대중컨벤션센터)설치 및 VIP 브리핑 (인공지능 차선변경 시스템: 한국정보과학회 2017년 SW 구현/데모 경진대회 결선 진출 <https://github.com/drexly/DeepDrive> Embedded Deep Learning, Computer Vision)
- 2017.12.19. 제 2회 동국 SW공모대전 금상 수상(<https://github.com/drexly/teamTAKEDOWN> upgraded via TensorFlow DNN)
- 2017.12.22. 한국소프트웨어종합학술대회 논문 포스터 발표(학부생논문-인공지능: 리뷰 데이터의 신뢰도를 반영한 한국어 감성사전)
- 2017.12.27. 과학기술정보통신부 Software Maestro 8기 수료(Full-stack Web : <https://github.com/drexly/SWmaestroMononity>)

#### 2017 SW 개발 출원 특허 및 프로그램 저작권:

- 특허: 메신저 내 키워드 분석 광고 방법(<https://github.com/drexly/chatbotAlresume> No .10-2017-0099630 국제발명박람회수상)
- 특허: 사물 인터넷 기기의 제어 방법(<https://github.com/drexly/chatbotAlresume> No. 10-2017-0099629 국제발명박람회수상)
- 특허: 인공지능 기반 영상(CCTV) 분석 시스템 및 객체 분석 방법(2017 SKT-NVIDIA 주최 AI 해커톤 우승: No. 10-2017-0149893)
- 프로그램 저작권: 공개 한국어 감성엔진 (한국 저작권위원회 등록번호: C-2017-034307 <https://github.com/drexly/openhg senti>)